The UNESCO Courier

A window open on the world

March 1976 (29th year)
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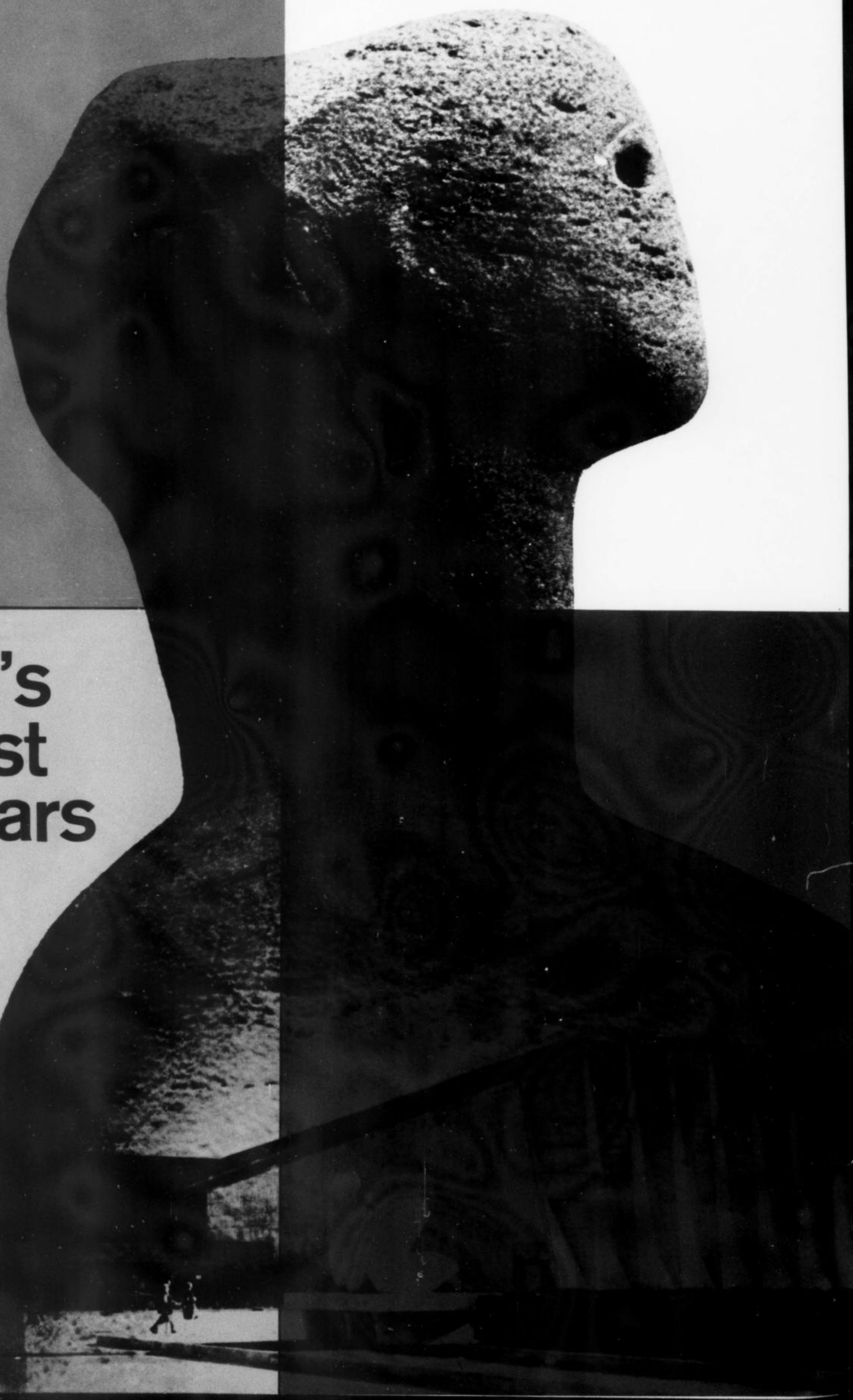
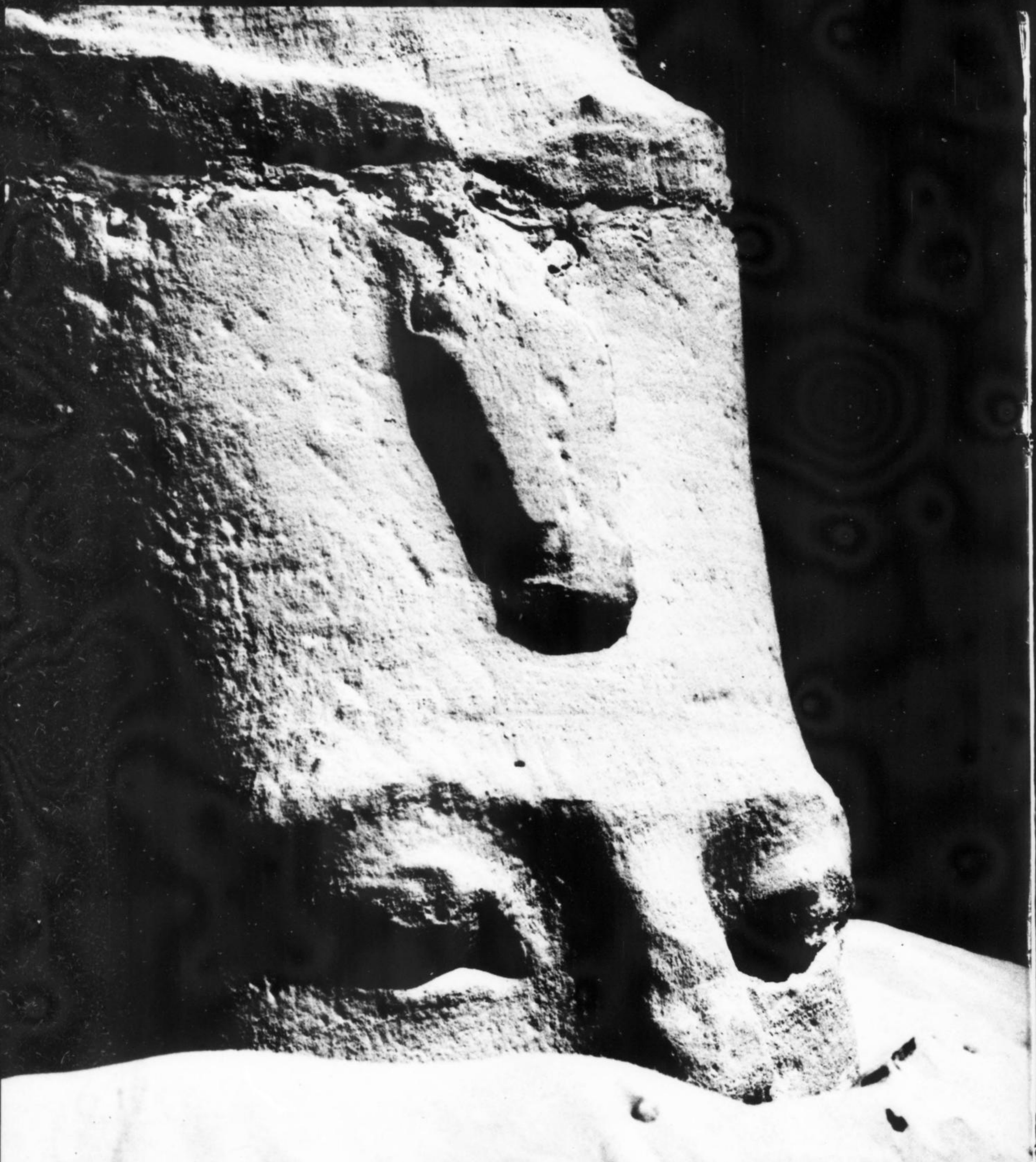


Unesco's first 30 years



TREASURES
OF
WORLD ART

108 *EGYPT*

Nefertari's veil of sand

This statue of Queen Nefertari (18 metres high) at Abu Simbel wears a veil of sand as she awaits cutting up during Unesco's famous Nubian rescue operation (1960-1968). The Abu Simbel temples were dismembered and re-erected 30 metres above their original site along the Nile. In this unique operation, engineers built sand-dune mountains to protect temple facade while structures behind were cut away from rock wall.

Photo © Hildegard Weber, Cologne, Fed. Rep. of Germany

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Cover © Unesco Courier.
Photos Unesco

Cover

This year on November 4, Unesco celebrates its 30th anniversary. This is symbolized on our cover by three works of art and architecture at Unesco's Paris headquarters. Dominated by the head and shoulders of Henry Moore's "Reclining Figure", the Unesco Conference building with the Moore statue outlined against its wall is shown bottom right. Bottom left (in red section) Joan Miro's ceramic "Wall of the Sun". Cover design for this issue was executed by Unesco graphic artist Rolf Ibach.

UNESCO'S EARLY YEARS

by Julian Huxley

Unesco's first Director-General (1946-1948)

Photo David Seymour - Unesco

This year marks the 30th anniversary of the foundation of Unesco. Born at the end of the Second World War, on 4 November 1946, Unesco has seen its membership grow from 20 countries in 1946 to 136 today. On the one hand, this issue focuses attention on Unesco's early years and its first Director-General, Julian Huxley, who died on 14 February 1975. On the other hand it presents a Unesco perspective on some of the major problems of the world today. The August-September double issue will present Unesco's 30 years of activity in comic strip form.

MY two and a half years in charge of Unesco affairs were the most exciting period of my life, but I must say also the most exhausting.

It all started only through the accident of Sir Alfred Zimmern's sudden illness early in 1945 when he was Secretary of the Preparatory Commission for Unesco. It was only because of this that I was officially asked to take over the Secretaryship of the Preparatory Commission in London.

In spite of this, I didn't feel suitable and when I entered the Commission's office, I felt, as I wrote in my diary at the time, like the headmaster of a school who is also its youngest pupil. After settling down, I took a fortnight off to write a pamphlet entitled : "Unesco, its Purpose and its Philosophy" to clarify my own thinking and, I hoped, that of the delegates in the forthcoming first General Conference (see passages from this document, page 14). This was to be held in Paris in December 1946 and would decidè the main outlines of Unesco's policy and programme and also elect its first Director-General.

As it turned out, the humanist attitude which I adopted in this pamphlet led various delegates, quite erroneously, to think that I was anti-religious, while my liberal views were taken by others as communist.

While still in London, I had recruited a number of the staff who would be needed in Paris whoever was appointed as Director-General. These included such figures as Joseph Needham, eminent both as biologist, historian of science and authority on Chinese affairs—he was to head Unesco's Natural Sciences Department; the cultured Jean Thomas, as Deputy Director-General and the many-sided Professor Pierre Auger, as a physicist, both of France.

We started work in January 1947 in the Hotel Majestic, which had been the Nazis' Paris Headquarters during the Second World War. Ironically enough, I, as Director-General of an Organization dedicated to peace, the promotion of knowledge and culture, occupied the room which had harboured the very unpeaceful, repressive Nazi Commandant.

The preamble of Unesco's Constitution, beautifully written by the American scholar-poet Archibald MacLeish, proclaimed that Unesco was primarily dedicated to peace—though through education, science and culture—and I had often to defend projects that were not specifically concerned with peace by maintaining that the promotion of education, science and culture, especially when involving the exchange of ideas and personnel between different regions was Unesco's primary task and could and would indirectly lead to peace through better mutual understanding.

In education, Unesco's first job was obviously to promote literacy in a largely illiterate world, but we soon found that literacy in the customary sense was not enough. Besides learning to read, write and do simple arithmetic, the large mass of underprivileged people needed to be educated in hygiene, in improved methods of agriculture and better care of their environment. This comprehensive programme we called "fundamental education". It proved very valuable in our early stages by lifting underprivileged peoples to a decent minimum of intellectual and physical advance.

Later, the phrase "fundamental education" was dropped and there were separate projects for health, in con-

It is in the nature of things that all wars are waged against children. Some suffer indirectly and others lose their lives, their limbs or their sight, like this young Italian boy, blind and armless after a hand grenade explosion, here learning to read Braille with his lips. One of Unesco's urgent post-war tasks was educational reconstruction. It promoted emergency school-building programmes, the preparation and distribution of textbooks and the standardization of Braille systems and took many other steps to meet the immense needs of children in war-torn countries.

junction with the World Health Organization, for general education, for science, for population control, for exchange of persons and for conservation—all co-ordinated by the Technical Assistance Department of the United Nations.

Besides this, there were numerous non-governmental associations concerned with different aspects of Unesco's work. Some were already in existence before 1945, like the International Museums Office, which I, as Secretary to the Preparatory Commission, agreed should be affiliated to Unesco, helping Unesco with advice, benefiting by grants or visits by specialists financed by Unesco.

Others had to be deliberately created, sometimes in the face of considerable opposition. This was the case with the International Union for the Conservation of Nature, IUCN for short, consisting of specialists in ecology, in establishing reserves to protect unspoiled scenery, rare and interesting plants and animals and in preventing pollution and unplanned urban spread.

Many delegates to the Conference, which we held at Fontainebleau in 1948, thought that preserving wild life and the like was outside Unesco's province, as it did not specifically promote peace. But eventually, the conference agreed to the formation of the Union and its affiliation with Unesco. I may add that the Union, both on its own and with grants from or personnel financed by Unesco has achieved a great deal in preserving much of the world's beauty and its interesting plant and animal inhabitants, though there is still much to be done.

It has also helped in conjunction with the United Nations and its Specialized Agencies in setting up the International Biological Programme, which is at the present moment surveying human health—as wealth—and the conservation and better utilization of the world's biological resources.

As regards Science, we found that the scientists in one country in a given region, like the Middle East, were often more ignorant of the work of scientists in other countries of their own region than of the work of leaders of science in more developed countries.

The Regional Centres for Science established by Unesco put local scientists in touch with each other so that they could apportion research in relation to the area's need, and they also put them in touch with world science by the information we provided.

We also set up a scheme for the exchange of individual experts; post-graduate students to work in the scientifically more advanced countries; specialists to advise on projects in so-called underdeveloped nations; exhibitions in world centres for artists ▶

in different regions; visits by eminent lecturers, and so forth.

In visual arts, we set up two special projects. One was a catalogue of good reproductions of well-known paintings with miniature coloured photographs of the originals and prices of the reproduction. This has proved extremely useful in schools in many countries. The other was the publication of large folio volumes illustrating little known works of painting and architecture and sculpture, such as the cave paintings of Ceylon and India. These were more valuable to specialists but certainly disseminated knowledge and appreciation which was otherwise unavailable.

I badly wanted to set up a powerful organization concerned with population control in association with the U.N. and, I hoped, its other Specialized Agencies; but religious and nationalist prejudices permitted only a handful of experimental projects. Today, I'm thankful to say, not only Unesco but the U.N. itself, the World Health Organization and also the World Bank are helping in this, in my opinion, the most important task facing mankind.

I must mention one final project suggested to me by Joseph Needham : the writing and publishing of a world history which would stress advances in science and literature, in culture and the arts, rather than political changes and military events. This was adopted, though against considerable opposition, by the Unesco General Conference in Beirut (Lebanon) in 1948, when my career as Director-General ended. However, in 1949, Professor Paulo de Berredo Carneiro of Brazil was appointed President and myself as Vice-President of the Commission appointed to supervise the writing of the work.

Today, the six volumes of the Cultural and Scientific History of Mankind, bringing it right up to date, have been published both in French and English, numerous other translations have been arranged and a pocket edition with fewer illustrations is being published. I have no hesitation in saying that this is a valuable achievement (1).

Naturally the scope of Unesco's activities has been much enlarged and often redefined in slightly different terms. I can truthfully say that my two and half years at Unesco were the high point of my life, a time when all my capacities and all my knowledge and energies were fully involved. I fervently hope and indeed confidently expect that Unesco will continue along the same general lines as a promoter of cultural advance and mutual understanding, but always on the lookout for new problems and new ways of tackling them.

From an interview with Sir Julian Huxley recorded in 1970.

(1) *History of Mankind: Cultural and Scientific Development*, published by George Allen and Unwin Ltd., London (U.K.) and by Harper and Row Publishers, New York (1963-1969). It has also been published in French, Greek, Serbo-Croat, Slovenian, and Spanish.

Photo USIS, Paris

1

(1) At the end of World War II many of Europe's cities were as devastated as this street in Sheffield (U.K.) after a bombing raid in 1940. Unesco was set up immediately after the war with the aim of using the resources of education, culture and science to contribute to international peace and security. Its Constitution was signed in London on 16 November 1945 by the representatives of countries from every continent. (2) Among the signatures on the Constitution reproduced here are those of A.A. Hekmat (Iran), Yücel (Turkey), Naji al-Asil (Iraq), E. Letts (Peru), Ellen Wilkinson (U.K.) John A. Beasley (Australia) and Leon Blum (France). (3) A year later, on 20 November 1946, the opening session of Unesco's first General Conference was held in the main amphitheatre of the Sorbonne in Paris. (4) The Conference continued its work until December 10 at Unesco's provisional headquarters in the Hotel Majestic, Paris. (5) Julian Huxley, Unesco's first Director-General, addresses the General Conference. On his left is Leon Blum (President of the Conference) and on his right Jean Thomas, Deputy Director-General of Unesco.

4

Photo Unesco - Eclair Mondial

Photo Unesco - Keystone

2

Photo Unesco - Eclair Mondial

3

BUILDING FOR PEACE ON THE RUINS OF WAR

5

Photo Unesco

7

JULIAN HUXLEY
scientist, humanist, and lover of nature

by Paulo E. de Berrêdo Carneiro

"WHAT I aimed at was to achieve better education for the underprivileged; a greater understanding of the role of science by all nations; exchange of students and teachers between countries with different ideologies or at different levels of cultural development; conservation of natural beauty and sites of historical interest; a greater understanding of evolution and its workings, both in nature and in human society; the extirpation of ideological and nationalist interference in matters of art, literature and science; measures against overpopulation. Above all, a consciousness of the unity of mankind and the need to co-ordinate efforts towards cultural and social progress on a world-wide scale."

It is in these words that Julian Huxley describes in his autobiography, *Memories*, the aims of the first programme for Unesco which he was called on to prepare in 1946 as Secretary of the Organization's Preparatory Commission.

Few indeed, in 1946, were those who could have taken charge of as bold and pioneering an enterprise as the United Nations Educational, Scientific and Cultural Organization.

Called on by the educators, scientists and scholars who had created Unesco, Julian Huxley accepted the challenge to make the new organization a living reality. His previous studies, his work, the whole course of his life had, in fact, prepared him to perform the task with brilliant success.

As a schoolboy at Eton, Julian Huxley was equally attracted to scientific research and literature. Latin and Greek interested him as much as animal life and behaviour, and he divided most of his free time between writing poems in these languages, dissecting insects, and bird-watching.

At 18 he won a scholarship in zoology at Balliol College, Oxford. By now he was spending all his spare time roaming through fields and woods, notebook and binoculars in hand, observing the different kinds of birds, noting their songs and jotting down descriptions of their nests, their eggs, and the distinctive characteristics of their behaviour.

As a young student at Balliol he made the acquaintance of distinguished Oxford figures in addition to the teachers with whom he studied experimental embryology, comparative anatomy and zoology. While at Oxford he also won the university poetry prize, the Newdigate, and bought his first microscope with the prize money.

In 1909 Julian Huxley attended an important international gathering held at Cambridge to celebrate the centenary of Charles Darwin's birth. During the ceremony, as he tells us in his autobiography, he thought of his grandfather, the famous biologist Thomas Henry Huxley, who had vigorously defended Darwin's work against the religious prejudices of those earlier times.

He resolved there and then to approach all his studies in a Darwinian spirit and to devote his major work to evolutionism, on which he threw much new light through his own research.

In the same year he published his first scientific paper, concerning a protozoan parasite in a freshwater shrimp, a survivor from the carboniferous epoch 300 million years ago, which had been found in Tasmania.

Soon afterwards, he was awarded a scholarship at the Naples Marine Biological Station, where he was delighted to discover almost limitless possibilities for research. His first piece of work, on the tissues of sponges, was immediately published in the

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PAULO E. DE BERREDO CARNEIRO *of Brazil has been associated with Unesco since 1946 when he was Brazil's representative on the Unesco Preparatory Commission in London. He is a member of Unesco's Executive Board and was its Chairman during 1951-1952. Permanent delegate of Brazil to Unesco from 1946 to 1965, he led his country's delegation to many sessions of Unesco's General Conference, of which he was President in 1962. He has been chairman of the Executive Committee for the International Campaign to Save the Monuments of Nubia since 1962. For many years he directed the work of the International Commission set up by Unesco to prepare the multi-volume History of Mankind—Cultural and Scientific Development (See page 15). A member of many scientific and cultural institutions, including the Brazilian Academy of the History of Science and the Institut de France (corresponding member), he taught chemistry at universities in Brazil and other countries and has lectured and written widely on philosophical, historical and literary subjects.*

Photo Unesco

As a broadcaster, lecturer and the author of some 40 books—scientific books based on original research and others on travel, religion, science and politics, popular science, natural history and poetry—Sir Julian Huxley became known to a wide public. His ability to interpret scientific and philosophic ideas in a lively style and easily understood terms earned him the award of the Unesco Kalinga Prize for the popularization of science, in 1953. (See also footnote page 38). Photo shows Sir Julian at the Kalinga prize-giving ceremony at Unesco's Paris H.Q. With him (on right) is Sir Sarvepalli Radhakrishnan, former chairman of Unesco's Executive Board who later became President of India (1962-1967).

Philosophical Transactions of the Royal Society. He next turned his attention to a rare Foraminiferan [a tiny marine creature] which lived in mud and whose reproduction process he was the first to describe. Each individual of this species divides up into about 500 miniature organisms, each resembling the parent except that their bodies are ovoid instead of elongated.

But his most important work at the Naples Institute concerned *Clavellina*, an Ascidian [a jelly-like animal] which lives attached to rocks in the sea. When its thorax is cut and left in a container, it shrinks into an opaque, formless mass. Only its heart-beat continues as evidence of normality. If this formless mass is replaced in clean water, it redifferentiates, not into a new thorax but a normal whole individual. This remarkable experiment was the starting point for many others of a similar kind.

Julian Huxley's stay at the Naples Institute was an extremely fruitful period for his biological work. It also brought him into contact with two distinguished scientists, Otto Warburg (later a Nobel Prizewinner) with whom ▶

Photos on this page show Julian Huxley at three stages in his long career. Right, the young zoologist in his laboratory at Oxford in the early 1920s.

Photo © Photopress, London

Photo © Keystone, London

As Secretary of the Zoological Society of London (1935-1942) Julian Huxley transformed the London Zoo. One of his projects was to set up a special children's zoo. In photo above, taken in 1938, a sea lion seems to listen attentively as Julian Huxley chats to a London zoo-keeper.

Photo Unesco

After serving as Secretary of the Preparatory Commission for Unesco in 1946, Julian Huxley was elected Director-General of the Organization at its first General Conference held in Paris in 1946. Photo right shows Julian Huxley and his wife Juliette at a Unesco function in Paris in the same year.

Huxley later worked in his laboratory at Heidelberg, and E.G. Conklin, an embryologist at Princeton University.

Huxley now returned to Oxford to take up a lectureship at Balliol and a demonstratorship in the university Department of Zoology. He gave free rein to his interests as a naturalist and spent most of his time in scientific bird watching.

His first descriptions of the courtship ceremonies of certain birds such as the great crested grebe were published in 1914 and had a major impact. Having been struck by the formalized nature of some of the male bird's actions, he concluded that they served to establish an emotional link between the couple. Julian Huxley's work on these courtship rituals make him a pioneer of ethology and a precursor of Konrad Lorenz and Nikolaas Tinbergen.

In the autumn of 1912 he sailed for the United States to attend the opening of the Rice Institute in Houston, Texas where he had been appointed to the chair of biology. This appointment which he took up the following year gave him the opportunity to get to know the United States, its universities and its scientists.

In New York his first visit was to the famous "fly-room" at Columbia University, where T.H. Morgan and his team had just completed their first great piece of research on *Drosophila*, the fruit-fly. One member of the team was H.J. Muller, a future Nobel Prize-winner, who was to become Huxley's assistant at the Rice Institute. During this period he met many noted American biologists, including E.B. Wilson, S. Flexner, Peyton Rous and Rosa Harrington.

A year after his arrival in Houston, the First World War broke out. In the early summer of 1916, Julian Huxley returned to England to join the army. His service with the armed forces, first in England then in Italy, lasted until the end of the war, when he returned to Oxford to take up a fellowship in Zoology at New College. Here he continued his research and teaching, numbering among his students many who were destined for a brilliant future in science.

In the time he could spare from his scientific activities, Julian Huxley read philosophical and religious works. His study of Abelard, St. Thomas Aquinas, St. Augustine, St. Francis of Assisi and other saints, mystics and theologians laid the foundations for the work he wrote later on the role of religion in present-day society, *Religion without Revelation*.

Immediately after his return to Oxford at the beginning of 1919, Julian Huxley proposed to Juliette Baillot, a charming Swiss girl he had met two years before. She accepted. "This provoked a whirlwind of happiness in my heart", he wrote in *Memories*, "and I spent much of my time writing to all my friends and relatives telling them

One of Julian Huxley's most remarkable biological discoveries was made when he studied the bristle-worm *Sabella* (right) at Lough Ine (Ireland) in 1934. His research showed that headless fragments of the worm's thorax would regenerate a complete thorax and abdomen, whereas it had previously been supposed that the brain and its nerves were needed for this process.

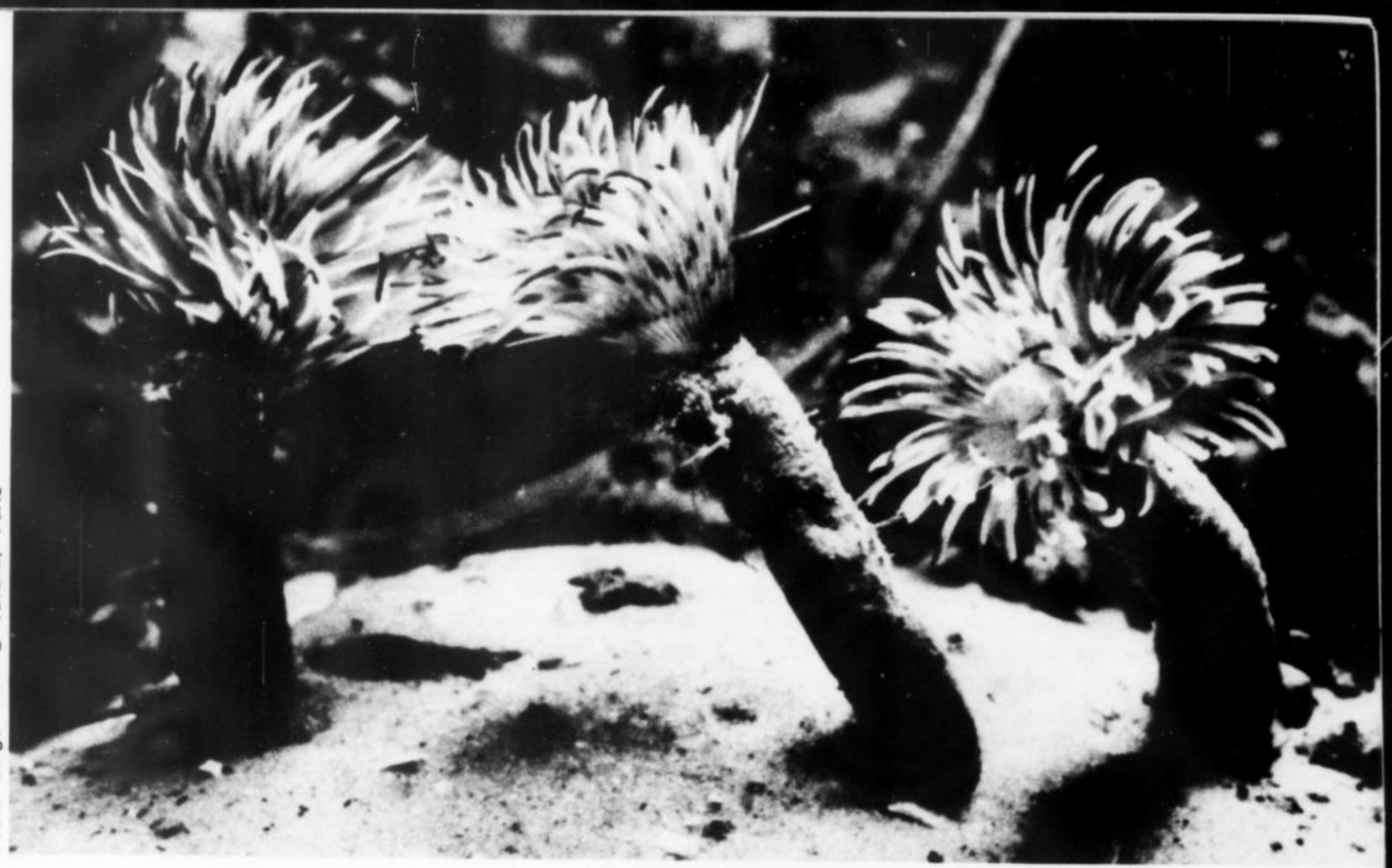


Photo Serge Yoff © Jacana, Paris

Photo © Union Tribune Publishing Co., San Diego, U.S.A.

During a visit to the United States in 1956 Julian Huxley makes friends with a baby orang-outang at San Diego Zoo. With him is his younger brother Aldous, distinguished novelist, essayist and critic.

of my good fortune." This happiness was to last a lifetime.

About this time, Oxford University prepared to send a scientific expedition to Spitzbergen in the Arctic Ocean. Julian Huxley was one of the organizers and in addition to him, the expedition included botanists, a geographer, a geologist and an ecologist.

Julian Huxley's task was to study Arctic birds and describe their habits. To his delight he saw species such as the grey phalarope and the purple sandpiper for the first time and analysed their sexual behaviour. Each of these two species is distinguished by the reversal of roles between the sexes: the hen (brightly coloured in the case of the grey phalarope) takes the initiative in courtship while the protectively coloured male broods the eggs and looks after the young chicks. The Spitzbergen expedition led to the foundation of the Oxford Exploration Society, the first of the British university exploration clubs.

In 1925 Julian Huxley left Oxford to become professor of Zoology at King's College in London. This move coincided with a turning point in his research and his career as a writer. His mind now turned increasingly to social problems, to which he applied the scientific methods which had proved their worth in his biological research.

The biologist became a sociologist, a humanist, an educator anxious to serve a world in disarray. His approach was that of a man of science who recognizes the need for free-ranging imaginative solutions in dealing with complex social problems.

The population explosion of modern times became one of his favourite themes as a writer and thinker. He returned to this problem again and again, demonstrating its gravity and its implications for mankind. He expounded his views on family planning in newspaper articles, lectures and radio broadcasts which won a wide audience. ▶

In 1930 he played an active part in the World Conference of Anglican bishops at Lambeth Palace in London, where family planning was a major topic of discussion. In its final report, the conference recognized the danger of over-population and left the practice of birth control to the conscience of the individuals concerned.

From a very early age, Huxley had no belief of any kind in the supernatural. He thought it possible to establish a moral system which was purely scientific in inspiration and which would be capable of uniting mankind. In his view, love of God should be replaced by love of nature and love of Humanity. His concept was of a religion without revealed dogmas, without deities, without heaven or earth.

To expound his main thoughts on this subject, he wrote in 1927 a book of major philosophical importance, entitled *Religion without Revelation.* Apart from his biological works this is undoubtedly his most important book. In a collection of lectures entitled *What Dare I Think?* published in 1931, he returned to many of the fundamental points he had raised in the earlier book: "Religion, in the light of psychological and anthropological science is seen not as a divine revelation, but as a function of human nature . . . God in the current sense in which they use the word, is the creation of man . . . Almost without exception, the elements and practices of the existing world-religions could be utilized by a religion which, abandoning the interpretation in terms of God, has adopted the scientific outlook as basis for its theology.

"[This new religion] ...can help to kill fear and to achieve freedom from the sense of sin. It can reveal to its adherents unexpected richnesses, possibilities of their own nature of which they were ignorant . . . But it will never be a real force in human affairs, unless, in addition to providing spiritual refuge and solace and the opportunity of doing miscellaneous good works, it makes some bold appeal to the moral sense and the imagination of humanity...

"Thus, whether looked at from the human or from the scientific point of view, a new religion cannot be a religion of negation, of death, of asceticism, of resignation. It must be religion of life... From the point of view of the individual's inner life, its message will be that life can be sacramental.

"The apprehension of truth or beauty; suffering or sacrifice; simple joy and simple health; love, spiritual and physical alike; ecstasy and discipline; self-surrender and self-control —the most widely differing aspects of life can become tinged with transcendent emotion, whereby we feel that we are greater than we know and come to experience a new value in existence... [This religion] can also help to give life a purpose beyond itself... Who can doubt that the motive of work for the continuation of the race and the increase of its capacities for achievement and enjoyment could be charged with religious emotion?"

This scientific humanism is based on the evolutionism of Darwin, but in my view, it has a much closer affinity with the philosophy of Auguste Comte and his religion of humanity.

In 1927 H.G. Wells invited Julian Huxley to join him and his son G.P. Wells in compiling an encyclopedia of biology, to be called *The Science of Life.* Huxley was to be responsible

CONTINUED PAGE 38

Observation of nature and the animal world preoccupied Julian Huxley from his schooldays to the end of his life. Devoted to the question of conservation of wildlife and natural habitats, he studied these problems in Africa where he carried out several missions for Unesco between 1960 and 1971 (see "Unesco Courier", September 1961). Below, perching happily on one leg, a crane cleans up its beak with the other foot.

Photo © Raghu Rai, New Delhi, India

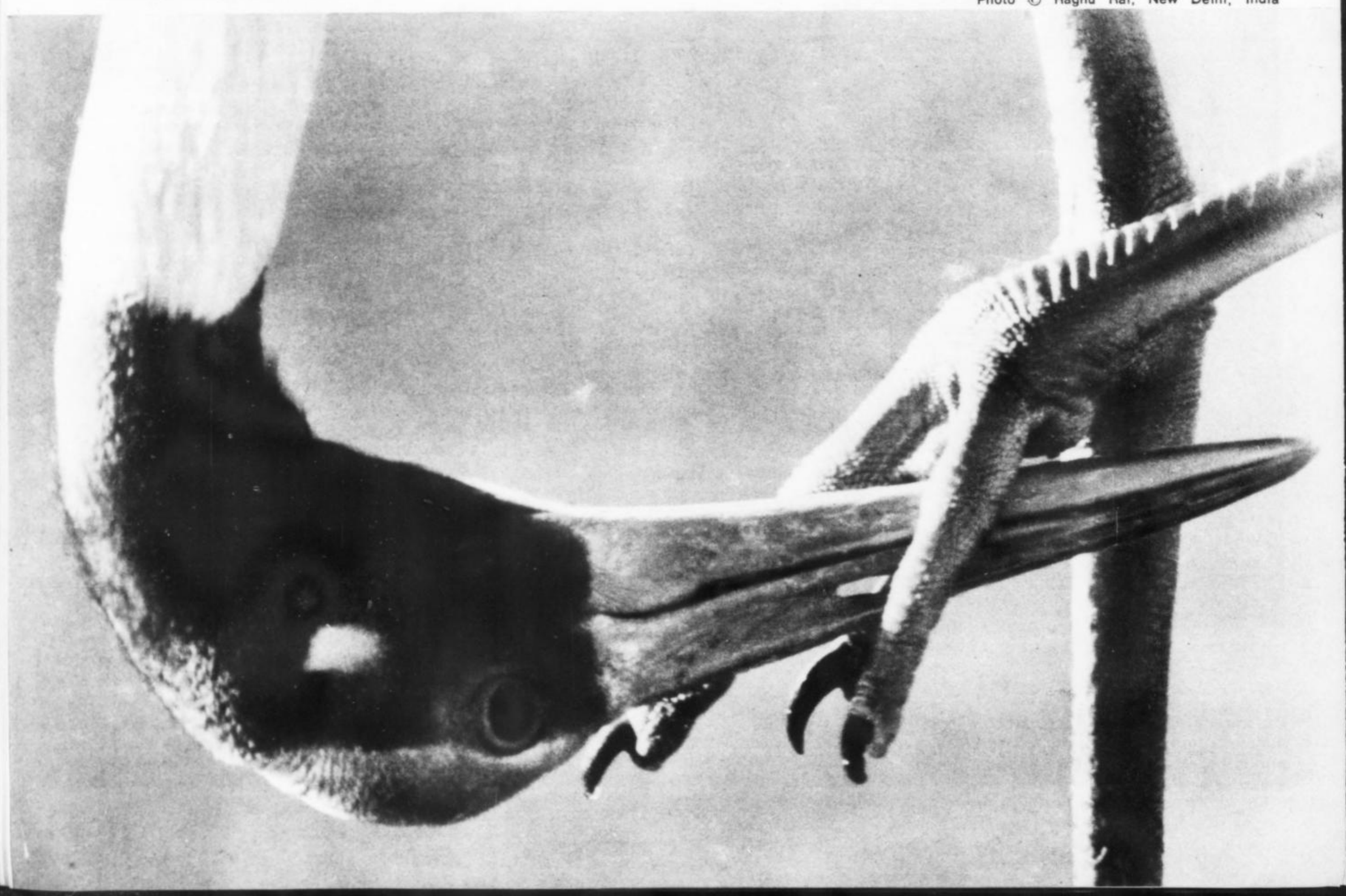


Photo © Air Ministry, London

A specialist on the subject of nature reserves, Julian Huxley helped to set up national parks and wildlife reserves in the United Kingdom after World War II. Photo shows him on the Berkshire Downs (England) during a visit of the U.K. National Parks' Commission to possible sites for parks and reserves.

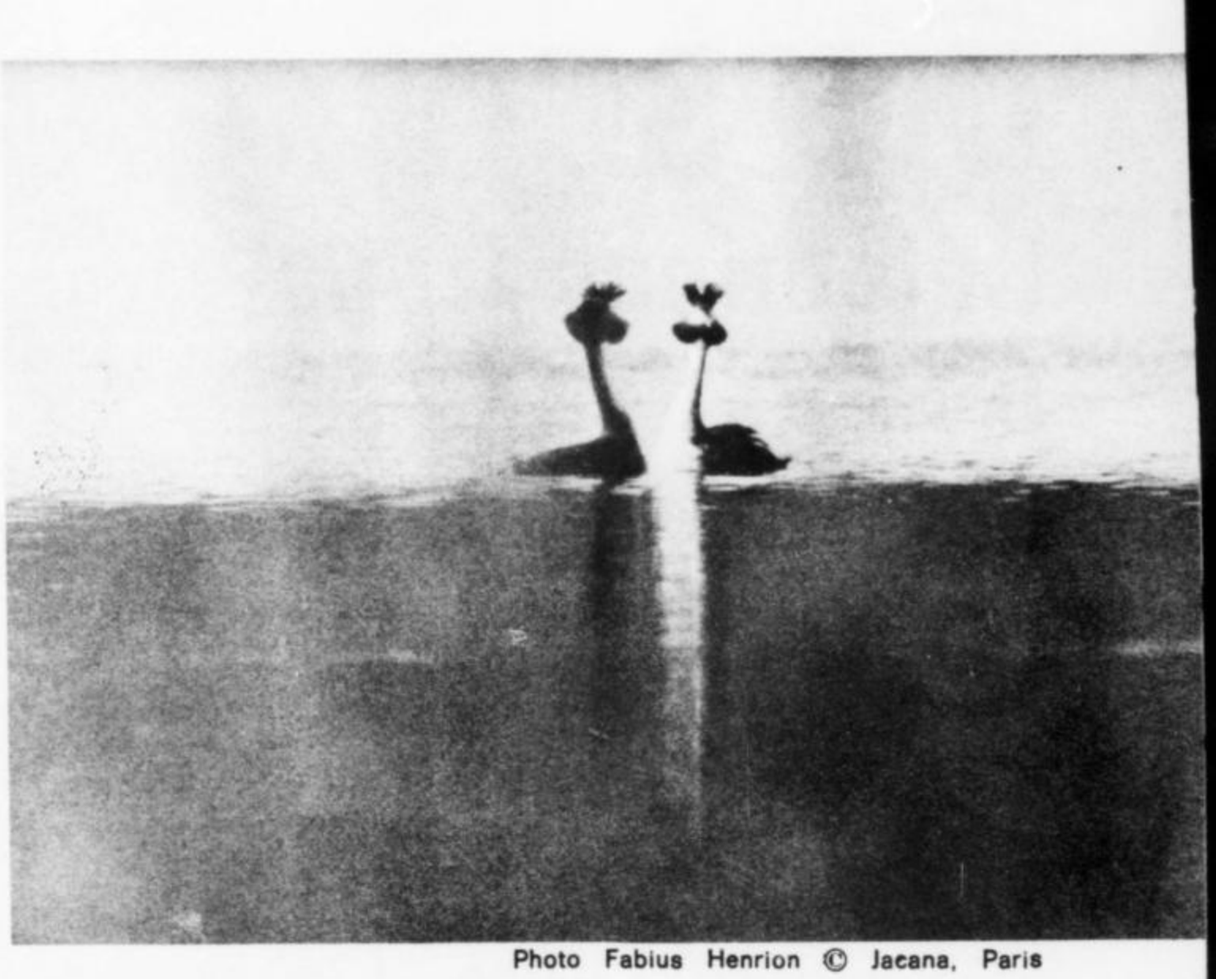


Photo Fabius Henrion © Jacana, Paris

Photo Max Jonin © Jacana, Paris

Julian Huxley's concern for scientific investigation as a biologist and zoologist was matched by his talents as an educator and an interpreter of science. His account of the courtship ceremonies of such birds as the great crested grebe (photo above) published in 1914, marked him as a pioneer of ethology. In 1934 he recorded the behaviour of gannets (photo left) on a Welsh island sanctuary in a remarkable documentary film on these seabirds entitled "The Private Life of the Gannet".

A PHILOSOPHY FOR UNESCO

Selections from a forgotten historic document

by Julian Huxley

In 1946, before Unesco was officially constituted, Julian Huxley drafted a long paper entitled "Unesco, its Purpose and its Philosophy." This document became the subject of much controversy for its so-called "anti-religious bias" with the result that the Unesco Preparatory Commission and the first General Conference of Unesco withheld official sponsorship of the text. Below, we publish salient passages from Huxley's "Philosophy" which has remained virtually unknown for the past thirty years.

Photo Unesco

UNESCO—the United Nations Educational, Scientific and Cultural Organization—is by its title committed to two sets of aims. In the first place, it is international, and must serve the ends and objects of the United Nations, which in the long perspective are world ends, ends for humanity as a whole. And secondly it must foster and promote all aspects of education, science, and culture, in the widest sense of those words.

Its Constitution defines these aims more fully. The preamble begins with Mr. Attlee's noble words—"since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed."

It continues by stressing the dangers of ignorance—"ignorance of each other's ways and lives has been a common cause, throughout the history of mankind, of that suspicion and mistrust between the peoples of the world through which their differences have all too often broken into war."

It then proceeds to point out that the late war was made possible by the denial of certain basic principles—"the democratic principles of the dignity, equality and mutual respect of men"—and by the substitution for them of "the doctrine of the inequality of men and races."

From these premises it proceeds to point out that "the wide diffusion of

HISTORY IN GLOBAL PERSPECTIVE. The publication of a six-volume history of the cultural and scientific development of mankind, produced under Unesco's auspices, was an unparalleled international achievement. Begun in 1950, the enterprise took almost 20 years to complete. Some 1,000 historians and scientists from many countries collaborated on this unique collective work which traced for the first time the evolution of man's cultural and scientific developments from prehistory to the present age. This global history stresses advances in culture, the arts, science, technology and philosophy rather than political and military history. The *History of Mankind: Cultural and Scientific Development* has so far appeared in English, French, Greek, Serbo-Croat, Slovenian and Spanish language editions. Photo shows on left, cover of the Greek edition and on right cover of Serbo-Croat edition, against the background of the Unesco Secretariat building in Paris.

culture, and the education of humanity for justice and liberty and peace, are indispensable to the dignity of man and constitute a sacred duty which all the nations must fulfil in a spirit of mutual assistance and concern" : and draws the notable conclusion, never before embodied in an official document, that a peace "based exclusively upon the political and economic arrangements of governments" would be inadequate, since it could not "secure the unanimous, lasting and sincere support of the peoples of the world," and that "the peace must therefore be founded, if it is not to fail, upon the intellectual and moral solidarity of mankind."

And finally, the States which are parties to the Constitution assert their belief "in full and equal opportunities of education for all, in the unrestricted pursuit of objective truth, and in the free exchange of ideas and knowledge."

They agree "to develop and increase the means of communication between their peoples and to employ these means for the purposes of mutual understanding and a truer and more perfect knowledge of their lives" : and they "hereby create the United Nations Educational, Scientific and Cultural Organization," whose purpose is then specifically laid down as that of "advancing, through the educational and scientific and cultural relations of the ▶

peoples of the world, the objectives of international peace and of the common welfare of mankind, for which the United Nations Organization was established and which its charter proclaims."

But in order to carry out its work, an organization such as Unesco needs not only a set of general aims and objects for itself, but also a working philosophy, a working hypothesis concerning human existence and its aims and objects, which will dictate, or at least indicate, a definite line of approach to its problems.

From acceptance of certain principles or philosophies, Unesco is obviously debarred. Thus, while fully recognizing the contribution made to thought by many of their thinkers, it cannot base its outlook on one of the competing theologies of the world... Neither can it espouse one of the politico-economic doctrines competing in the world today to the exclusion of the others—the present versions of capitalistic free enterprise, Marxist communism, semi-socialist planning, and so on.

It cannot do so, partly because it is contrary to its charter and essence to be sectarian, partly for the very practical reason that any such attempt would immediately incur the active hostility of large and influential groups, and the non co-operation or even withdrawal of a number of nations.

For somewhat similar reasons it cannot base itself exclusively on any special or particular philosophy or outlook. Nor, with its stress on democracy and the principles of human dignity, equality and mutual respect, can it adopt the view that the State is a higher or more important end than the individual; or any rigid class theory of society. And in the preamble to its Constitution it expressly repudiates racialism and any belief in superior or inferior "races," nations, or ethnic groups.

And finally, with its stress on the concrete tasks of education, science and culture, on the need for mutual understanding by the peoples of the world, and on the objectives of peace and human welfare on this planet, it would seem debarred from an exclusively or primarily other-worldly outlook.

Unesco's main concern is with peace and security and with human welfare, in so far as they can be subserved by the educational and scientific and cultural relations of the peoples of the world. Accordingly its outlook must, it seems, be based on some form of humanism. Further, that humanism must clearly be a world humanism, both in the sense of seeking to bring in all the peoples of the world, and of treating all peoples and all individuals within each people as equals in terms of human dignity, mutual respect, and educational opportunity.

It must also be a scientific humanism, in the sense that the application of science provides most of the material basis for human culture, and also that the practice and the understanding of science need to be integrated with that of other human activities. It cannot, however, be materialistic, but must embrace the spiritual and mental as well as the material aspects of existence, and must attempt to do so on a truly monistic, unitary philosophic basis.

Finally it must be an evolutionary as opposed to a static or ideal humanism. It is essential for Unesco to adopt an evolutionary approach. If it does not do so, its philosophy will be a false one, its humanism at best partial, at worst misleading.

An evolutionary approach provides the link between natural science and human history; it teaches us the need to think in the dynamic terms of speed and direction rather than in the static ones of momentary position or quantitative achievement: it not only shows us the origin and biological roots of our human values, but gives us some basis and external standards for them among the apparently neutral mass of natural phenomena; and it is indispensable in enabling us to pick out, among the chaotic welter of conflicting tendencies today, those trends and activities and methods which Unesco should emphasize and facilitate.

Thus the general philosophy of Unesco should, it seems, be a scientific world humanism, global in extent and evolutionary in background.

Evolution in the broad sense denotes all the historical processes of change and development at work in the universe. It is divisible into three very different sectors—the inorganic or lifeless, the organic or biological, and the social or human. The inorganic sector is by far the greatest in extent, comprising the overwhelming bulk of the cosmos, both of interstellar space and of the material aggregates we call stars.

The biological sector is very much limited in extent, being confined to the outer surface of the single small planet Earth, and perhaps to the very few similar situations in the universe. On the other hand, with the emergence of the two basic properties of living matter—self-reproduction and variation (mutation)—a quite new and much more potent method of change became available to life, in the shape of Natural Selection. And as a result the possible ▶

The new 3 R's: schools, satellites, skills

Unesco has a direct stake in the use of space communication for education, science and culture and has co-operated closely in studies or planning for broadcasting satellites in Asia, Africa, the Arab States and Latin America. In India, Unesco helped train programme producers for the experimental project SITE, whereby educational TV programmes are beamed via a satellite directly to community receivers in some 2400 villages in six Indian states. Special school programmes are also telecast. Below, villagers in Rajasthan State watch programme picked up by a roof antenna.

Photo E. Lloyd Sommerlad - Unesco

Unesco has helped many countries in the battle to eradicate illiteracy and was a pioneer in developing "functional literacy" teaching that aims to improve technical skills and knowledge. Right, electricians at work on a high tension line in Mali, where a Unesco-aided pilot project in functional literacy, launched in 1966, reached 83,000 workers. Unesco is aiding literacy campaigns in African countries, in the Arab States, and in Asia and Latin America.

Below right, schoolgirls in Quito (Ecuador) learn how rain is formed from an experiment on water condensation, part of a Unesco project to give greater depth to primary school programmes in Ecuador. Within the framework of a major project to develop primary education in Latin America, launched by Unesco in 1957, Latin American countries created within ten years over 2,000 teacher-training schools, and enrollments of primary school-age children rose from less than 50 per cent to between 87 and 95 per cent.

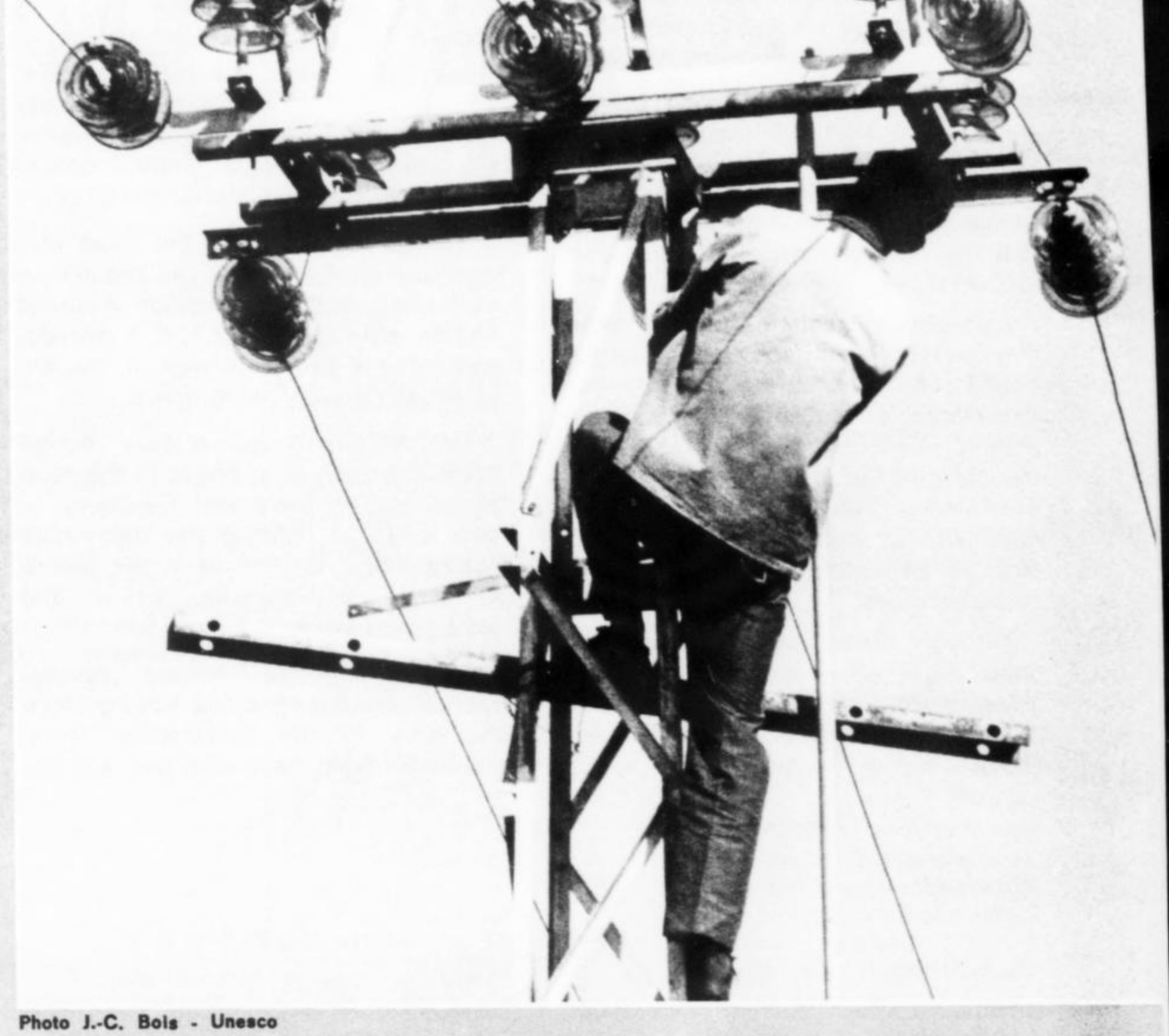


Photo J.-C. Bois - Unesco

Photo United Nations

rate of evolution was enormously speeded up.

Finally there is the human sector. This is still further restricted in extent, being confined to the single species, man. But once more a new and more efficient method of change is available. It becomes available to man through his distinctively human properties of speech and conceptual thought, just as Natural Selection became available to life as a result of its distinctive properties of reproduction and variation.

Objectively speaking, the new method consists of cumulative tradition, which forms the basis of that social heredity by means of which human societies change and develop. But the new method also has a subjective aspect of great importance.

Cumulative tradition, like all other distinctively human activities, is largely based on conscious processes—on knowledge, on purpose, on conscious feeling, and on conscious choice. Thus the struggle for existence that underlies natural selection is increasingly replaced by conscious selection, a struggle between ideas and values in consciousness.

Through these new agencies, the possible rate of evolution is now once more enormously speeded up. What is more, there has so far been a steady acceleration of the new rate.

Whereas in lower palaeolithic times, major change required something of the order of 10^6 years, by the late upper palaeolithic the unit was nearer 10^4 years, and in historic times soon came down to the century or 10^2 years. During the last hundred years each decade has seen at least one major change—if we are to choose ten such, let us select photography, the theory of evolution, electro-magnetic theory with its application in the shape of electric light and power, the germ theory of disease, the cinema, radioactivity and the new theories of matter and energy, wireless and television, the internal combustion engine, chemical synthetics, and atomic fission.

Today, indeed, even the most momentous changes, such as the discovery and practical application of atomic fission, may take only half a decade, and there is as yet no sign of the rate of acceleration slowing down.

Evolution in the human sector consists mainly of changes in the form of society, in tools and machines, in new ways of utilizing the old innate potentialities, instead of in the nature of these potentialities, as in the biological sector.

Man's inherited mental powers cannot have changed appreciably since the time of the Aurignacian cave-dwellers : what have changed are the ways in which those powers are used, and the social framework which conditions their use. This is not to say that what has happened since the Aurignacian period or since the time of ancient Greece, is not evolution : it is a very astonishing bit of evolution.

Nor does it mean that man's innate mental powers could not be improved. They certainly were improved (presumably by natural selection) in the earliest stages of his career, from Pekin man through the Neanderthalers to our own species ; and they could certainly be improved further by deliberate eugenic measures, if we consciously set ourselves to improve them. Meanwhile, however, it is in social organization, in machines, and in ideas that human evolution is mostly made manifest.

But it is not only complexity which increases with time. In the biological sector, evolution has led to greater control over the environment and greater independence of the changes and chances of the environment. It has also promoted a higher degree of individuality. And this trend is connected with another which has led to increase of mental powers—greater capacities for acquiring and organizing knowledge, for experiencing emotion, and for exerting purpose.

This last trend, towards fuller knowl-

CONTINUED PAGE 23

Photo Eric Schwab - Unesco

During the past 30 years Unesco has developed far-reaching programmes to promote and improve library services. It has provided training fellowships for librarians, organized seminars and courses on library development and helped set up librarians' training centres in several parts of the world. One pilot project led to the creation in 1951 of an experimental public library in Delhi (India). Open 11 hours a day, every day of the week, the library soon became one of the busiest in Asia. Here, Indian girls browse in the library's children's room.

The UNESCO Courier

A 50-QUESTION QUIZ ON UNESCO

Answers at end of questions. But don't peek !

1 "Since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed." This phrase in Unesco's Constitution is based on the words of a statesman and of a poet. Who are they?

STATESMEN

a) Winston Churchill
b) Lenin
c) Clement Attlee
d) Franklin D. Roosevelt

POETS

e) Pablo Neruda
f) Paul Valéry
g) Archibald MacLeish
h) William B. Yeats

2 Unesco's Constitution is deposited in one of these cities:

a) San Francisco
b) Paris
c) London
d) Geneva

3 How many Member States had Unesco when it was created in 1946?

a) 18
b) 20
c) 53
d) 102

4 Below are the names of Unesco's six Director-Generals. Can you put them in chronological order?

Luther H. Evans
René Maheu
Julian Huxley
Vittorino Veronese
Amadou-Mahtar M'Bow
Jaime Torres Bodet

5 Which of Unesco's Director-Generals (see list previous question) has held office for the longest period?

6 How many Member States did Unesco have in February 1976?

a) 102
b) 123
c) 136
d) 141

7 The world spends over 200 billion dollars yearly on armaments. Unesco's current budget for *two years* is:

a) 930 million dollars
b) 530 million dollars
c) 320 million dollars
d) 170 million dollars

8 Unesco's budget is voted by the United Nations. True or false?

9 Unesco launched an international campaign to save "the pearl of Egypt", a name given to:

a) the Valley of the Kings
b) the temples of Philae
c) the temples of Abu Simbel
d) the great temple of Luxor

10 Which are the two most translated authors or books according to Unesco's latest international bibliography of translations, *Index Translationum?*

Dostoievsky
Jules Verne
the Bible
Engels
Karl Marx

List continues overleaf

Photos Unesco

Shakespeare

Lenin

Tolstoy

Balzac

Pearl Buck

Gorki

c) World Population Year

d) International Book Year

14 Unesco is helping to preserve the world's largest statue of Buddha (53 m. high) located at:

a) Pagan (Burma)

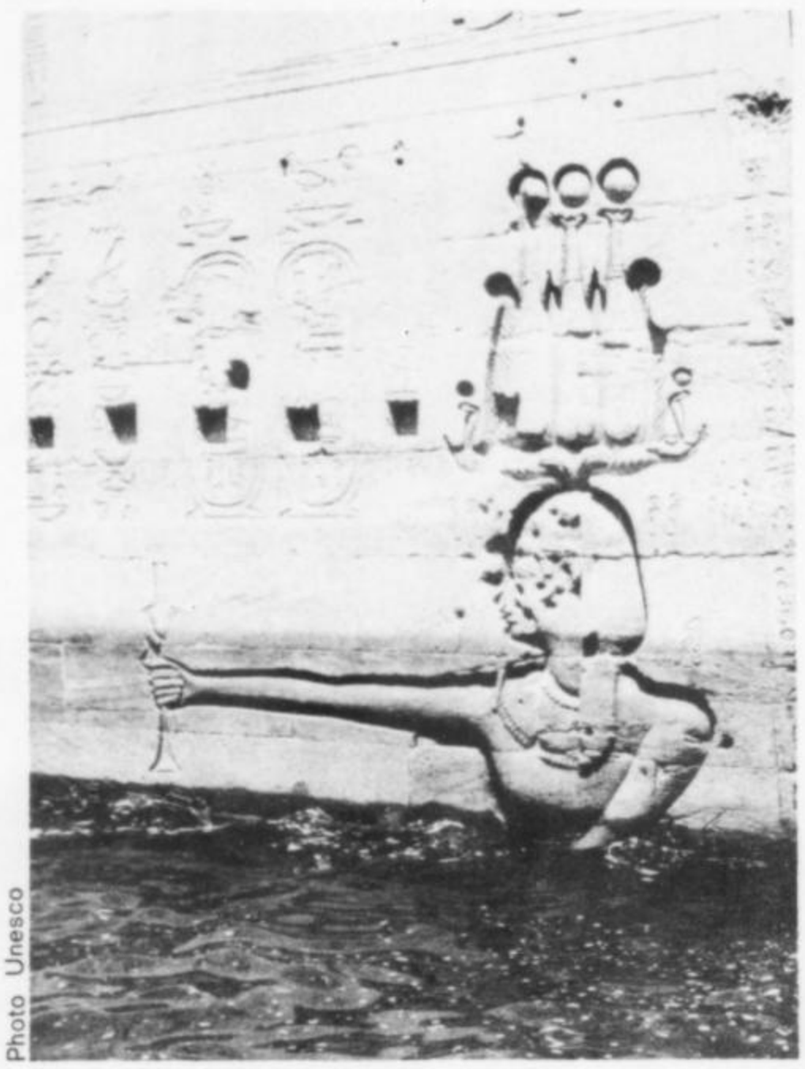


Photo Unesco

9

11 Unesco has helped or is helping to restore or preserve the five monuments and sites below. Place them in their respective countries (1 to 5):

a) Carthage

b) Machu Picchu

c) Borobudur

d) Isfahan

e) Bonampak

1) Indonesia

2) Iran

3) Tunisia

4) Peru

5) Mexico

12 Unesco has launched a programme for the setting up of a worldwide scientific and technical information system. It is known as:

a) NATIS

b) UNISIST

c) IUCN

d) MAB

13 In 1975 Unesco gave a major place in its programme to one of the following themes:

a) International Education Year

b) International Women's Year

b) Bamiyan (Afghanistan)

c) Polonnaruva (Sri Lanka)

d) Ajanta (India)

e) Kamakura (Japan)

15 Between 1959 and 1965 Unesco organized a major international oceanographic expedition during which a fleet of research vessels from 24 countries explored the depths of which one of these oceans?

a) Pacific Ocean

b) Arctic Ocean

c) Antarctic Ocean

d) Indian Ocean

16 Among these Nobel prizewinners for literature, which two received the award after translations of their works had appeared in the Unesco Collection of Representative Works?

a) George Seferis (Greece)

b) Rabindranath Tagore (India)

c) Yasunari Kawabata (Japan)

d) Albert Camus (France)

17 The study of arid zones forms part of an important Unesco research programme on Man and the Biosphere. An arid zone is:

a) a desert zone where no life exists

b) a zone where rainfall is too low for ordinary crop growth

c) a hot desert zone

18 The world's arid and semi-arid zones cover:

a) 1/3 of the earth's land area

b) 1/4 of the earth's land area

c) 3/4 of the earth's land area

19 The international campaign launched by Unesco to save Venice has:

a) been abandoned as the costs involved are too high

b) led the Italian Government to obligate $475 million to safeguard the city and the lagoon

c) led Unesco to develop Venice's industrial zones in order to bring new life to the city and safeguard its historic monuments.

20 (*a*) Unesco set up the International Social Science Council. True or false?

(*b*) Unesco set up the International Film and Television Council. True or false?

21 Unesco's entire programme is inspired by the Universal Declaration of Human Rights, adopted by the United Nations on:

a) 8 March 1945

b) 8 May 1945

c) 10 December 1948

d) 6 June 1952

22 Claude Lévi-Strauss, Michel Leiris, L.C. Dunn, N.P. Dubinin and Otto Klineberg have all worked with Unesco on a major international problem concerned with:

a) the origins of man

b) oral traditions in different societies

c) racism

d) population growth

23 Unesco has a major project for preserving the remains of a great civilization that developed between 2500 and 1500 B.C. at:

a) Bonampak

b) Bogazköy

c) Mohenjo-Daro

d) Sumer

24 In 1957 Latin America had about 630,000 primary school-teachers. Today, thanks to a project launched by Unesco with Latin American countries, this figure has:

a) doubled

b) tripled

c) quadrupled

25 What is the Pantanal?

a) A Tibetan medicinal plant

b) part of the basin of the river Paraguay

c) a project in India to promote international understanding

26 Unesco created the International Music Council.

True or false?

Photo Unesco

14

27 Unesco's latest *Catalogue of Reproductions of Paintings* reproduces *The Smoker, The Card Players, The Boy with Red Vest* and *Fruit-Dish and Apples* which were all painted by one of these artists:

a) Van Gogh

b) Henri Matisse

c) Joan Miró
d) Paul Cézanne

28 During the International Hydrological Decade 1965-1974 Unesco studied the world's water cycle. In which of the following forms is most fresh water found?
a) underground water
b) lakes and rivers
c) vaporized water in the atmosphere

29 How many historians collaborated in the preparation of Unesco's 6-volume *History of Mankind: Cultural and Scientific Development?*
a) 200
b) 300
c) 500
d) 1,000

30 Unesco created the International Theatre Institute.
True or false?

31 Unesco has always promoted the development of national parks and biological reserves. The world now has how many national parks and reserves?
a) 106
b) 1,220
c) 10,900

32 Unesco's top best-seller, published in 28 languages, is its "Source Book for Science Teaching", a:
a) do-it-yourself science textbook
b) textbook on biology and microbiology
c) teacher training manual
d) textbook on the history of world science

33 The United Nations University, jointly sponsored by Unesco and the United Nations, has its headquarters in:
a) Athens
b) Ibadan
c) Tokyo
d) New York

34 Two masterpieces of Latin American literature, *Martin Fierro* by José Hernandez, and *Facundo* by Domingo F. Sarmiento, have been published in Unesco's Collection of Representative Works.
Which country did both authors come from?
a) Argentina
b) Mexico
c) Venezuela
d) Peru

35 The Mohammad Reza Pahlavi Prize and the Nadezhda K. Krupskaya Prize are Unesco-sponsored awards for:
a) the best school textbook
b) literacy teaching
c) translation

36 In July 1965, a Unesco-organized oceanographic research expedition (33 vessels from 7 countries) began a survey of one of the following ocean currents. Which one?
a) Kuroshio
b) Humboldt
c) Benguela
d) Gulf Stream

37 Unesco has developed new types of buildings for:
a) schools in disaster-hit areas
b) refugee hostels in South East Asia
c) research centres in desert regions

38 Unesco is preparing a major general history of one of these continents:
a) Latin America
b) Asia
c) Africa
d) Europe

39 Unesco promotes the teaching of "modern mathematics". A mathematician whose work helped the development of this new way of teaching maths is:
a) George Boole
b) Aristotle
c) Spinoza
d) al Biruni
e) Albert Einstein

40 The Kalinga Prize is a Unesco prize for:
a) music
b) architecture
c) literacy teaching
d) popularization of science

41 Unesco recently published a study on the efficiency and cost of programmed learning. Programmed learning is:
a) alternating schooling and work in factories and farms
b) individualized tuition based on questions and answers
c) using T.V. programmes for teaching in schools
d) continuous revision of school courses

42 Unesco has a programme on plate tectonics, dealing with:
a) a new method of printing
b) a theory on the evolution of the earth's crust
c) industrial uses of tortoise-shells
d) computer translations

43 In which region of the world has the greatest number of countries asked Unesco to assist them in examining the feasibility of using communication satellites for education?
a) Latin America
b) Africa
c) Asia
d) Europe

44 *a)* The number of illiterate persons in the world is falling.
True or false?
b) The percentage of illiterate persons in the world is falling.
True or false?

47 Which of these leading scientists, scholars and writers have participated in Unesco's work?
a) Claude Lévi-Strauss (France)
b) Frédéric Joliot-Curie (France)
c) Margaret Mead (U.S.A.)
d) Jacques Maritain (France)
e) Paulo Freire (Brazil)
f) Alejo Carpentier (Cuba)
g) Sir Sarvepalli Radhakrishnan (India)
h) Leopold Sedar Senghor (Senegal)
i) Norair M. Sissakian (U.S.S.R.)
j) Benedetto Croce (Italy)
k) Mahatma Gandhi (India)
l) Taha Hussein (Egypt)
m) Aldous Huxley (U.K.)

48 Unesco publishes an annual summary of information on natural disasters providing data on earthquakes, volcanic eruptions and tsunamis. A tsunami is:
a) a series of huge sea waves sometimes caused by an earthquake
b) a waterspout
c) a Japanese observatory for recording earthquake shocks
d) an underwater volcanic eruption

49 Unesco set up the International Council of Museums?
True or false?

50 Unesco set up the World Confederation of Organizations of the Teaching Profession.
True or false?

unesco miró

Photo Unesco

human rights

45 More than 80 countries participate in Unesco's Man and the Biosphere ecological research programme, launched in 1970. What is ecology?
a) the science of relations between living organisms and their environment
b) the science of the protection of living organisms
c) a branch of technology for controlling pollution
d) a policy for limiting the waste of natural resources

46 Unesco helped to set up the European Nuclear Research Centre (CERN) near Geneva.
True or false?

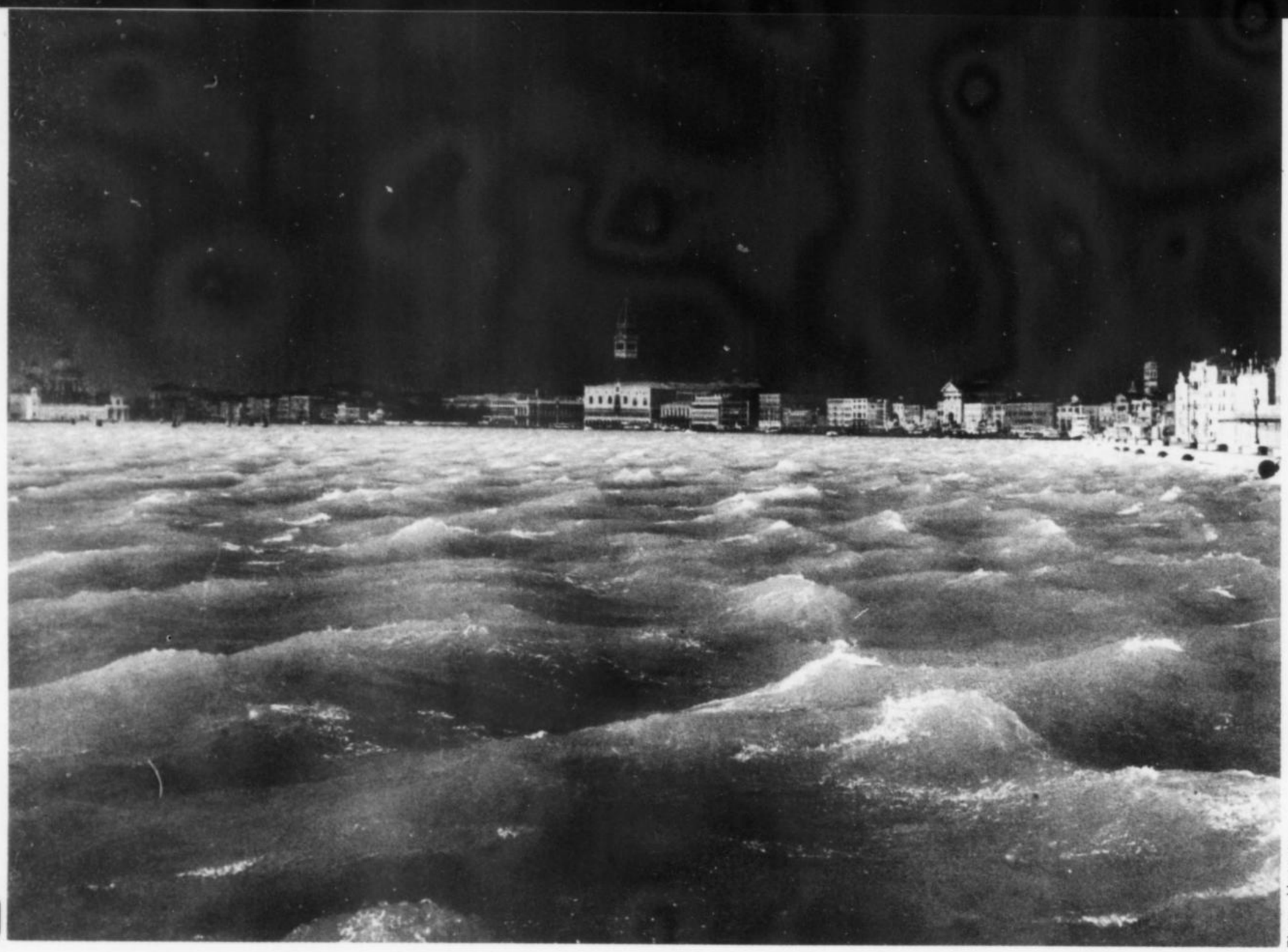


Photo Unesco

19

ANSWERS

1 : *c.* Clement Attlee, Prime Minister of the United Kingdom, inaugurating the Constituent Conference of Unesco, held in London, in November 1945, used the words "wars begin in the minds of men". *g.* The American poet, Archibald MacLeish, later completed the phrase with, "it is in the minds of men that the defences of peace must be constructed."

2: *c*

3: *b*

4: Julian Huxley, Jaime Torres Bodet, Luther H. Evans, Vittorino Veronese, René Maheu, Amadou-Mahtar M'Bow.

5: René Maheu (for 12 years, from 1962 to 1974). The only Director-General of Unesco to hold office for two terms, Mr. Maheu died on 19 December 1975.

6: *c,* (Grenada, in the Caribbean, 136th Member State, joined Unesco on 18 February 1975).

7: *d*

8: False.

9: *b*

10: First, the Bible, second, Karl Marx. Following them in descending order are: Engels, Lenin, Dostoievsky, Tolstoy, Jules Verne, Gorki, Pearl Buck, Balzac, Shakespeare (Latest edition of the *Index,* published end 1975, covers the year 1972).

11: *a*-**3,** *b*-**4,** *c*-**1,** *d*-**2,** *e*-**5.**

12: *b.* The meaning of the other sets of initials are: MAB (Man and the Biosphere) NATIS (National Information Systems)—both are Unesco programme activities. IUCN (International Union for the Conservation of Nature and Natural Resources), was set up under Unesco's auspices in 1948.

13: *b.* International Education Year was held in 1970, International Book Year in 1972, World Population Year in 1974.

14: *b*

15: *d*

16: *a, c*

17: *b*

18: *a*

19: *b.* As part of the Unesco campaign, about 30 committees have been set up in different countries, each committee assuming responsibility for the restoration of one monument.

20: *a.* True.
b. True.

21: *c*

22: *c.* (Their studies were published collectively in Unesco's "The Race Question in Modern Science", 2nd ed. 1973).

23: *c.* Mohenjo-Daro (Indus Valley, Pakistan).

24: *b*

25: *b.* Part of the basin of the river Paraguay, covering frontier areas of Brazil, Bolivia and Paraguay. In this region a major hydrological survey is being carried out jointly by Brazil and Unesco.

26: True.

27: *d*

28: *a*

29: *d*

30: True.

31: *b*

32: *a.* It explains how to build simple scientific apparatus with easy-to-come-by materials (tin cans, bottles, knitting needles, etc.).

33: *c*

34: *a*

35: *b.* The prizes were established in 1967 and 1969 respectively by the Shahinshah of Iran and the Government of the U.S.S.R. for outstanding work in literacy teaching.

36: *a*

37: *a*

38: *c*

39: *a.* George Boole, 19th-century British mathematician.

40: *d*

41: *b*

42: *b*

43: *c.* Asia: (India, Indonesia, Iran, Pakistan, Philippines).

44: *a.* False. Total numbers have increased because of the global population explosion.
b. True. Global percentage has dropped thanks to literacy campaigns launched by Unesco and many countries.

45: *a*

46: True.

47: All of them.

48: *a*

49: False.

50: False.

edge, richer emotion, and more embracing purpose, is continued (though by different methods) in the human sector, and is continued at a much increased rate. But to it is superadded another trend—an increase in the capacity to appreciate values, to appreciate experiences that are of value in their own right and for their own sake, to build on knowledge, to work through purpose, and to inject ethical values into the process of social evolution itself.

WE now know much about the methods of biological evolution: the existence of several quite different types of selection; the conditions which promote or retard change; the subordinate position of mutation as against selection in directing the course of evolution; the evolutionary roles of the degree of specialization and of progress shown by an organism, of its biological environment, and of its physical environment respectively, and the interaction between them; the evolutionary conflict between the limitations set by an organism's nature and past history and the requirements of the present, and its solution by means of some new adjustment—or its lack of solution, followed by extinction.

This last point immediately recalls the thesis, antithesis, and synthesis of Hegelian philosophy, and the Marxist "reconciliation of opposites" based upon it. Indeed, dialectical materialism was the first radical attempt at an evolutionary philosophy. Unfortunately it was based too exclusively upon principles of social as against biological evolution, and in any case was undertaken too early, before either the facts or their analysis were able to support any such vast superstructure.

Today it is possible at least to begin the construction of a comprehensive philosophy of evolution ; and many of its conclusions will be of value in formulating details of Unesco's own philosophy.

For it is of major importance that biology has enabled us to detect a direction in evolution as a whole, and not merely within the small domain of human life, to which the term progress can properly be applied.

This evolutionary progress, we find, is directed towards an increase of the following characteristics: throughout evolution, an increase in complexity of organization; on this, in the biological and human sectors, is superposed a more important trend towards greater control over and greater independence of the environment, and, in later phases, one towards an increase of mental capacities; and finally, in the human sector alone, an increase in the understanding and attainment of intrinsic values, which now in its turn becomes the most important characteristic of progress. Throughout, progress has the further characteristic of always permitting further progress, never shutting the door on later advance.

Of special importance in man's evaluation of his own position in the cosmic scheme and of his further destiny is the fact that he is the heir, and indeed the sole heir, of evolutionary progress to date. When he asserts that he is the highest type of organism, he is not being guilty of anthropocentric vanity, but is enunciating a biological fact.

Furthermore, he is not merely the sole heir of past evolutionary progress, but the sole trustee for any that may be achieved in the future. From the evolutionary point of view, the destiny of man may be summed up very simply: it is to realize the maximum progress in the minimum time. That is why the philosophy of Unesco must have an evolutionary background, and why the concept of progress cannot but occupy a central position in that philosophy.

The analysis of evolutionary progress gives us certain criteria for judging the rightness or wrongness of our aims and activities, and the desirability or otherwise of the tendencies to be noted in contemporary history—tendencies of which Unesco must take account.

Thus mere increase of our control over nature is not to be valued for itself, yet appears to be a necessary foundation for future progress. Put in a way more closely affecting Unesco's programme, research may be perverted, and its material applications may be over-valued; yet without them we shall not advance. This conclusion applies *a fortiori* to mere complexity of social organization.

Again, even knowledge that appears to be wholly beneficent can be applied in such a way that it does not promote progress. Thus, the application of medical science may increase the number of human beings in a given area but lower their quality or their opportunities for enjoyment of life; and if so, in the light of our basic criterion of evolutionary direction, it is wrong.

We are brought by a new route to realize once more the need for a Unesco policy balanced between many fields—in this instance, Unesco policy would have to include, besides the application of medical science, studies on agricultural productivity (soil erosion, mechanization, etc.) and on social welfare, and also the provision of birth-control facilities.

In general, Unesco must constantly be testing its policies against the touchstone of evolutionary progress. A central conflict of our times is that between nationalism and internationalism, between the concept of many national sovereignties and one world sovereignty. Here the evolutionary touchstone gives an unequivocal answer. The key to man's advance, the distinctive method which has made evolutionary progress in the human sector so much more rapid than in the biological and has given it higher and more satisfying goals, is the fact of cumulative tradition, the existence of a common pool of ideas which is self-perpetuating and itself capable of evolving. And this fact has had the immediate consequence of making the type of social organization the main factor in human progress or at least its limiting framework.

Two obvious corollaries follow. First, that the more united man's tradition becomes, the more rapid will be the possibility of progress: several separate or competing or even mutually hostile pools of tradition cannot possibly be so efficient as a single pool common to all mankind. And secondly, that the best and only certain way of securing this will be through political unification.

As history shows, unifying ideas *can* exert an effect across national boundaries. But, as history makes equally evident, that effect is a partial one and never wholly offsets the opportunities for conflict provided by the existence of separate sovereign political units.

THE moral for Unesco is clear. The task laid upon it of promoting peace and security can never be wholly realized through the means assigned to it—education, science and culture. It must envisage some form of world political unity, whether through a single world government or otherwise, as the only certain means for avoiding war.

However, world political unity is, unfortunately, a remote ideal, and in any case does not fall within the field of Unesco's competence. This does not mean that Unesco cannot do a great deal towards promoting peace and security. Specifically, in its educational programme it can stress the ultimate need for world political unity and familiarize all peoples with the implications of the transfer of full sovereignty from separate nations to a world organization.

But, more generally, it can do a great deal to lay the foundations on which

CONTINUED PAGE 30

UNESCO
and the world outlook for tomorrow

by Amadou-Mahtar M'Bow
Director-General of Unesco

In the article below, Unesco's Director-General, Amadou-Mahtar M'Bow, examines Unesco's role in the world today and the outlook for tomorrow. His text serves as an introduction to the findings of an international advisory panel (see page 26) set up last year by Mr. M'Bow to survey the major problems of the world in the light of Unesco's fields of interest and the new international economic order.

THE present situation in the world and the outlook for the last quarter of the 20th century seem to me to show that Unesco, as it attains its 30th year, has just as important a mission to fulfil as when it was founded at the end of the Second World War.

Unesco's original and essential function, which ultimately is an ethical one, is still in fact to contribute to peace by promoting international co-operation in education, science, culture and communication.

The dangers to which world peace is exposed are in evidence every day. But we know, too, that there are other threats, in some cases resulting from the very powers which science and technology have given to mankind: natural resources are being exploited without order or control, our environment is deteriorating, the inequalities between countries or groups of countries, and indeed within certain countries, are becoming intolerable, and misunderstandings between cultures are deepening despite, or perhaps even because of, the rising flood of information, which sometimes looks as if it is going to submerge us.

I am therefore convinced that, to ward off these dangers, it is essential to engage in a joint, world-wide effort of reflection on where our civilizations are heading.

Unesco has a duty to take part in this reflection in depth, which should be its foremost obligation. Unesco's particular vocation as an international organization is to be a forum for those who serve science or education, culture or communication. Here they can examine the great problems of our time in the light of different approaches originating in many parts of the world,

The distinctive Y-shaped Secretariat building of Unesco's headquarters (circled) is clearly visible in this helicopter view of part of Paris's Left Bank. Photo was taken from almost directly above the Eiffel Tower, (bottom).

Photo © IGN, Paris

exchanging, supplementing and consolidating their viewpoints.

In emphasizing Unesco's rôle in international intellectual co-operation I do not feel that I am singling out an aspect of the Organization's mission which is basically different from its work to promote development.

There is, of course, often a tendency to draw a distinction between these two aspects of Unesco's work. It is pointed out that during its early years, when its members belonged mostly to the industrially developed world in the northern hemisphere, Unesco was chiefly concerned with promoting intellectual co-operation, whereas later, as new States which had recently become independent joined the Organization, it turned to concrete action to assist development.

These two forms of action must be complementary, however, for apart from the need to base action for development on sound knowledge and skills—which Unesco can secure from the international community only if it is a lively centre for carrying out studies and pooling ideas—the actual work involved in promoting development affords opportunities for intellectual and cultural exchanges, so that eventually no fundamental difference between intellectual co-operation and operational action can be clearly discerned.

But above all, I am convinced that the problem of development is inseparable from a whole complex of matters considered as relating to intellectual life. We cannot accept the picture, inspired by a facile idealism, of Unesco on the one hand devoting some of its efforts to scientific and cultural co-operation and the world of ideas, in the hope that such co-operation will further the spirit of peace in the world, and on the other addressing itself to the task of improving the situation of the least privileged.

The distinguishing feature of the world today seems to me, on the contrary, to be the close interdependence between all its parts, all the regions composing it, all the human groups living in it. Development is therefore not a problem peculiar to a certain number of countries. It is a world problem, because its significance is something involving a global complex of relationships and mechanisms, a certain kind of order or disorder.

It is a concept applicable alike to the prospects of the industrialized countries, wondering about the future of their growth and its effects on living conditions, and to the longing for a better life in the countries of the Third World.

It is a unifying concept in the domain of theory, even though it may cover the most serious disparities between human groups and between individuals, and as such, more than any other, it implicitly calls for human solidarity, that solidarity whose absolute necessity I stressed on taking office as Director-General of Unesco, pointing out that it presupposes not only the acceptance of differences between individuals and between cultures but also concerted efforts to achieve justice and progress for all.

I have dwelt on the question of development in this way partly no doubt because it is central to our preoccupations, but also because it appears to me to provide an excellent illustration of some of the major problems affecting the future of mankind and necessitating a concerted approach on the part of the international community if they are to be solved.

■ ***Amadou-Mahtar M'Bow***

THE ROOTS OF WORLD

Short extract from a collective text by:

YOSHIO ABE, Professor, University of Tokyo.
SAMIR AMIN, Director, African Institute for Economic Development and Planning, Dakar.
MARGARET J. ANSTEE, Deputy Regional Director, Bureau for Latin America, United Nations Development Programme, New York.
BÉCHIR BENYAHMED, Director of *Jeune Afrique* magazine, Paris.
WILBERT CHAGULA, Minister for Economic Affairs and Development Planning, United Republic of Tanzania.
JEAN-MARIE DOMENACH, Director of *Esprit* magazine, Paris.
MARION DONHOFF, Chief Editor of the weekly *Die Zeit*, Hamburg.
ABDUL-RAZZAK KADDOURA, Former Rector, University of Damascus.
ALFRED KASTLER, Member of the French Academy of Sciences; Nobel Prize for Physics.
M.G.K. MENON, Secretary, Department of Electronics, Government of India.
YEHUDI MENUHIN, Former President, International Music Council, Unesco, Paris.
CHARLES MORAZE, Director, Institute of Studies for Social and Economic Development, University of Paris.
AURELIO PECCEI, Chairman of the Club of Rome, Italy.
RAUL PREBISCH, Former Special Representative of the Secretary General, United Nations Emergency Operation, New York.
RADOVAN RICHTA, Director, Institute of Philosophy and Sociology of the Czechoslovak Academy of Sciences, Prague.
JOAQUIN RUIZ-GIMENEZ, Professor, University of Madrid.
ABDUL AZIZ EL SAYED, Former Director-General, The Arab Educational, Cultural and Scientific Organization, Paris.
VADIM SOBAKINE, Professor of International Law, Moscow.

WE are now undergoing a period of profound and rapid, though uneven, and not infrequently crisis-ridden change. This change is largely connected with the ever-increasing power available to man through the development of science and technology.

The roots of the crises lie, however, in the crucial sphere of social relations which to a considerable degree are still not sufficiently adapted to cope with the rapidity of change caused by science and technology.

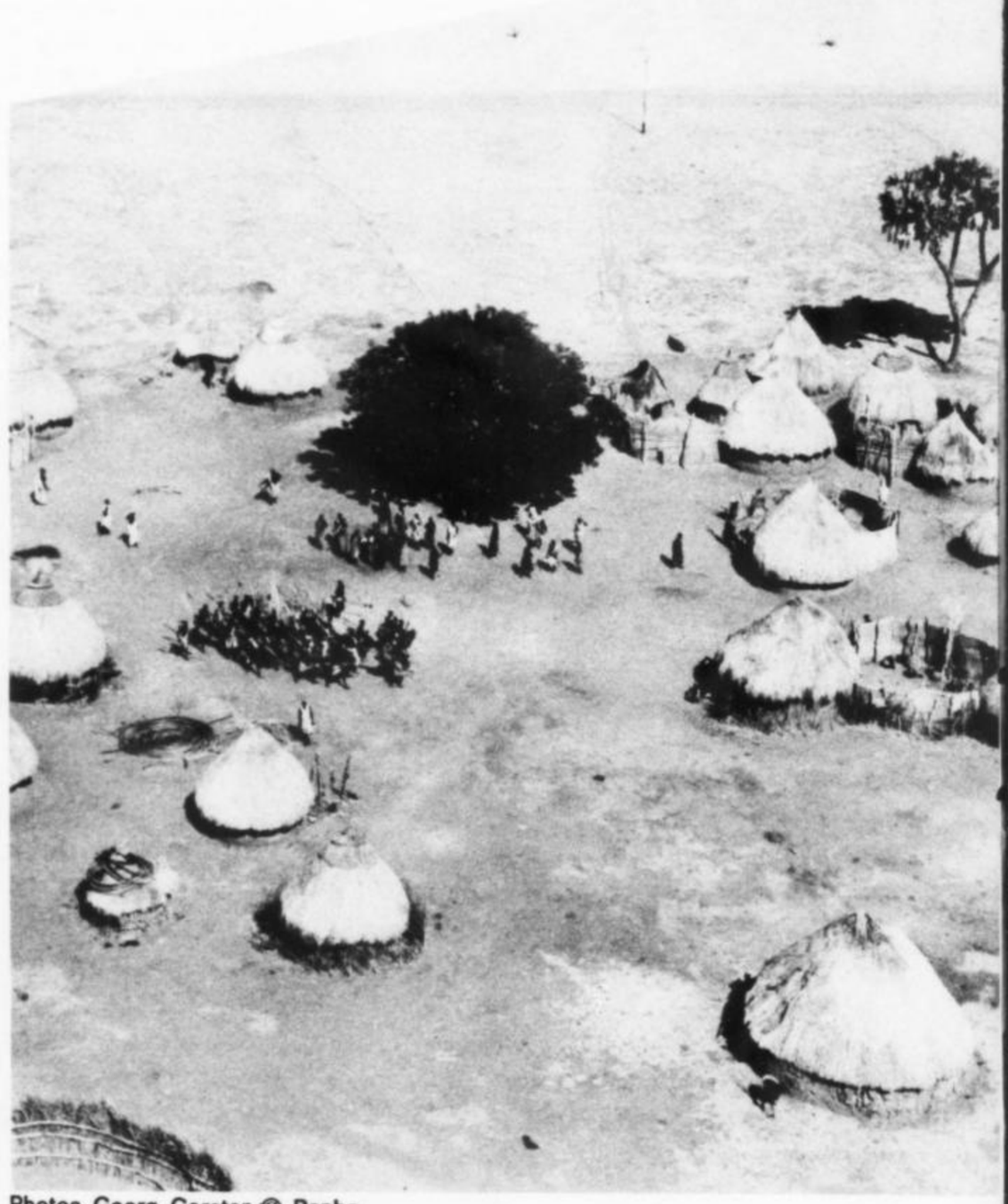
Technology is ambivalent. On the one hand it has brought immense benefits to mankind. On the other, it has resulted in an incredible accumulation of destructive devices. Furthermore, the contradictions inherent in the transfer of technology from the industrial centres to the developing areas of the world have brought very serious maladjustments and disruptions. Inequalities have been accentuated and an extraordinary demographic growth is taking place.

One thing is beyond doubt: none of the urgent problems facing mankind today and tomorrow can be solved successfully if the conditions of peace are not ensured, if the relaxation of international tension is not transformed into an irreversible process and if the enormous resources, today still tied up with armaments, are not gradually released for human development.

Efforts for the consolidation of peace, which is to be understood as a just and democratic system of international relations based on the principles of peaceful coexistence and not simply as the absence of war, should be expanded in all spheres, from economics to science, from diplomacy to culture.

Annual expenditure on the arms race is probably around 200 to 250 billion dollars—a sum equal to the total national income of those countries in which the majority of mankind is living. At the same time twenty-five hundred million men and women live a largely precarious existence at levels of nutrition below the acceptable minimum.

Photo Dominique Roger - Unesco



Photos Georg Gerster © Rapho

A GROWING CRISIS

The present growth-rate of these populations is such that their number is expected to double in 25 years.

The currently accessible resources of the earth have their limits. Within the space of a few generations we are frittering away reserves of energy below the ground which nature has taken thousands of millions of years to accumulate.

In the immediate future there is a danger that we shall destroy, without a thought for future generations, the plants and trees produced over the ages. In the last 50 years, nine-tenths of the forests of some tropical islands have disappeared. Many forests are being ravaged by the paper industry, on which the press of several industrialized countries, as well as certain other industries and commercial interests make excessive demands.

The equatorial forest is being attacked in turn. The future is also being jeopardized through the excessively primitive exploitation of natural resources by famished groups of human beings. Their pressing needs are destroying resources which, if exploited rationally, would help to ensure future progress.

Under the pressure of either justified or artificial imperatives designed to maintain economic growth, increase consumption or satisfy it without heeding the consequences, today's generations are plundering and polluting nature and condemning future generations, tomorrow's vastly increased populations, to live in a seriously degraded environment.

"No man is an island, entire of itself." The English poet John Donne's famous words, written in the 17th century, have never been more relevant than today. As inhabitants of a "global village", our very survival calls for an effort to rise above our differences and to transcend self-interest in the search for solidarity as a world community. Photos here symbolize the evolution of the human outlook from that of the small community and the region to a truly global perspective. Photo far left is of a statue by the Swiss sculptor Alberto Giacometti which stands in a patio at Unesco's headquarters in Paris.

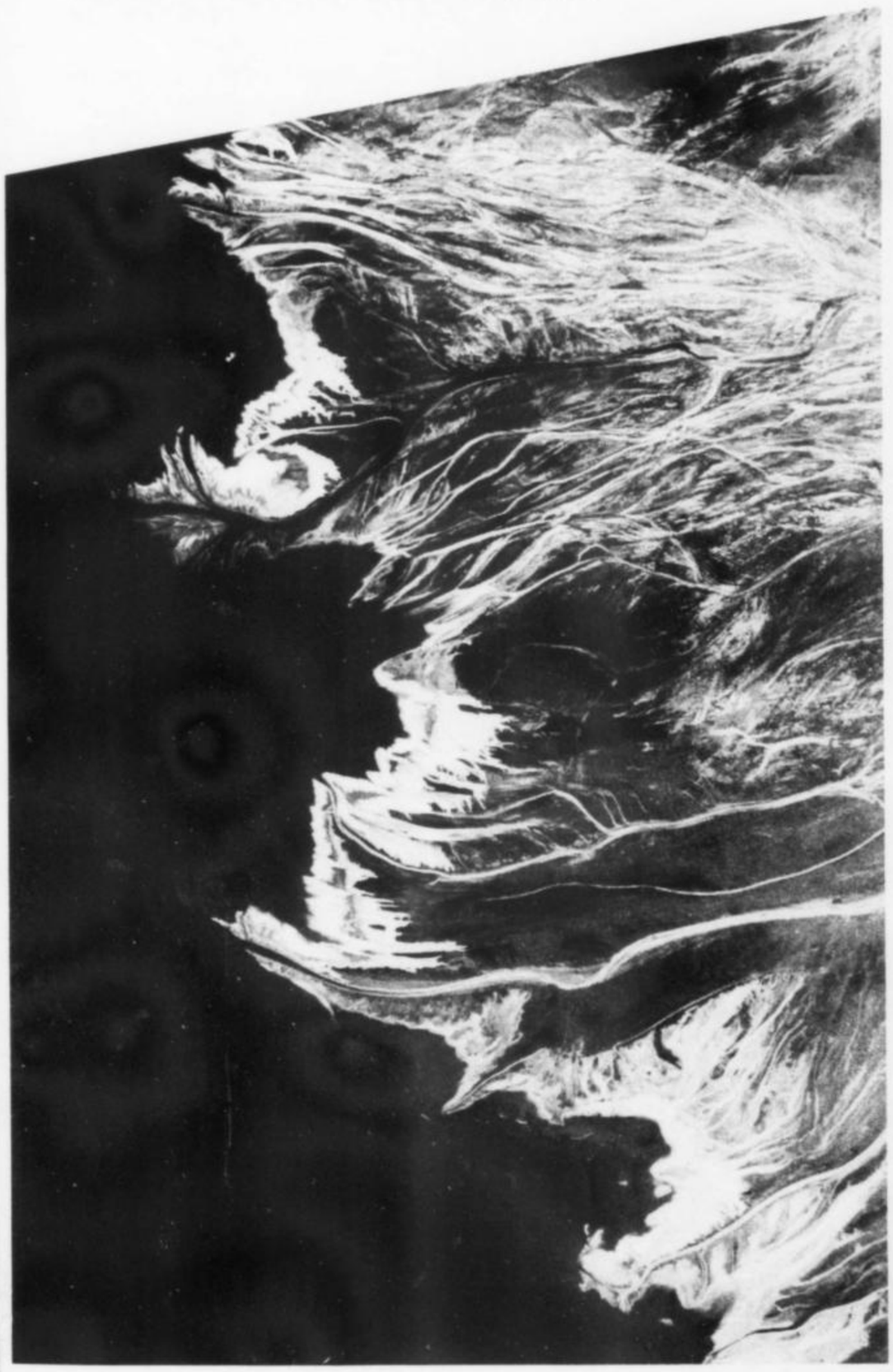


Photo USIS

Thus the very fact that our resources (whether renewable or not) are limited would indicate that the "Western model of development" cannot be applied everywhere or at all times. A plan of progress based on the Western model until now considered by some groups as capable of extension all over the world, is henceforth faced with fundamental contradictions.

In some societies where they are firmly established, industrialization and technology deprive individuals and groups of the possibility of influencing their living conditions, and hence their own destiny.

The issue at stake is man's ability to establish a comprehensible and creative relationship between himself, his group and the environment.

Human rights and freedoms are threatened by multiple intrusions into private life. As a result of the spread of computer science and communication techniques, life is being conditioned on the basis of surveys whose aims in some cases are to a certain extent inquisitorial. Thus some of the industrialized countries must undertake a new kind of struggle to defend human rights, the very notion of which is an empty promise for the masses of the developing countries who are deprived of the most elementary means of satisfying their needs.

These considerations emphasize the close interdependence of the problems facing the modern world. We are not faced with distinct problems, each of which we may try to solve separately and in isolation. We are dealing with a complex whole in which mechanisms or phenomena are closely interrelated, acting or reacting on one another. The world must be considered as a totality or a system whose parts are organically linked.

A global view must therefore be a prerequisite to any attempt to solve the different problems of today. The United Nations declaration on a New International Economic Order can be regarded as an event of world-wide significance attesting to the joint endeavours of nations to achieve a positive settlement of urgent problems of present-day social and economic development. The introduction of a New International Economic Order obviously concerns not only economics, but is also a matter of social, scientific, technological and cultural relevance.

The problems of peace, of human rights, and of the survival of mankind are not to be separated from the problems of development itself. For this reason we should look beyond economic development. We must give up thinking of the centres of economic power as the sole repositories of truth, civilization and universality.

It has been held in certain quarters that industrial growth, modelled on that of certain European or North American centres, would itself bring about a general improvement in human conditions, each nation being free to reproduce the proposed pattern for itself. We must face the fact that this is not so.

Once it is seen as global, development can no longer be the direct extension to the whole world of the knowledge, ways of thought, life styles or experiences specific to a single region of the world; each local development must be related to its own values and culture.

It is not enough to transfer the sum total of the knowledge available in developed countries to the developing countries; to do this excludes the possibility of any genuine implantation of science and technology in the countries at the receiving end. It favours the "brain drain" and even slows down the general advancement of knowledge by depriving the creative imagination of access to more varied sources than those on which the existing system drew.

The immediate problem facing the developing countries is that of establishing an infrastructure for science. As long as this does not exist, as long as these countries do not possess their own scientific capability, there can be no authentic scientific development, but only transplantation of imported science, which does not correspond to the true needs of the country.

The kind of scientific development which does correspond to the needs of a country can only be based on an awareness of its civilization, traditions and values.

Whilst science has been concerned with discovering knowledge and understanding nature, its applications have been largely governed by the profit motive to the benefit of small sections of human society—groups or countries; and indeed, in this process, distortions have crept into the priorities for the growth of science itself.

We would also like to draw attention to the huge sums spent on scientific research, half of which at least are spent on armaments which become obsolete or cancel one another out as quickly as possible; and to the sums which are spent on stimulating and attempting to satisfy unnecessary needs of the consumer system.

An orientation of scientific and technological development basically lacking any underlying commitment to overall social progress has given rise in many quarters to a feeling of "frustration" and "disillusionment", to a call for the "containment of science" and for the "taming" of technology, ultimately resulting in fear and hatred of science and technology in general.

In actual fact, science is one of the great creative manifestations of human genius. What is needed is a new concept and long-range international strategy for the development of science and technology which reflects overall global social needs—a concept and strategy that should not and must not, in their rational advance, become detached from the basic human orientation and fundamental values of human life.

With the headlong progress of science and technology, there are new developments in the offing whose implications are of a global nature for human society as a whole—such as interference with the genetic code, deliberate efforts to modify climate, mass employment of information systems and storage devices with permanent memories, industrial utilization of micro-organisms, creation of closed man-nature metabolism cycles and so on.

CONCERNING questions of so far-reaching a character, there is need for a widely based discussion leading to a global concept and in this Unesco should play an important role.

A truly sound concept of the future of contemporary civilization can only be based on a parallel development of man and society on the one hand, and technology on the other. We are entering a period in which—without well-thought-out programmes of social development, without a purposeful control of social processes and without a purposeful shaping of our way of life—man's socially useful abilities will be prodigally wasted. We need to realize that the control of social processes is at once the most comprehensive and the most difficult task confronting contemporary science.

Culture is not a luxury reserved for those whose elementary needs are satisfied; it is linked with the organization of society, and to it society owes its dynamic force. It is made up of the wisdom of the illiterate or the experience handed down through generations of manual workers as well as of the highest scholarship. Traditions which have been forgotten or destroyed by inconsiderate modernization are irreparable losses to the understanding of our destiny.

To over-assert cultural particularities is just as dangerous as to underrate them. It is another way of running the same risks. We must maintain a constant equilibrium between sciences and cultures, although this is not enough. It must be matched by an equilibrium in mutual efforts at comprehension, and by incessant adjustments between what different cultures have to learn from one another.

The processes of education have clearly to be two-way. No educational body can properly transmit what it knows unless it is sufficiently familiar with those to whom it is addressing itself. And since no one can know everything, mechanisms should be established to provide balanced exchanges and thus offset the inequa-

lities of knowledge. The study and setting up of mechanisms of this kind is a particularly arduous task since it has never yet been attempted.

If it had been possible for such equilibria between the two complementary flows of communication to exist spontaneously, the virtues of peace, freedom, equality, and human rights and duties would come just as naturally to human beings as their physiological functions.

For example, it has been established that a foreign language is learned more easily at school when the pupil knows how to use his own language. Even learning of the most difficult kind becomes readily accessible if the learning process is based on experience that has been properly lived and assimilated.

It is not to be taken for granted that men will escape the course of events which has led them to the present dangers; the survival of the planet is at stake. Is it not high time to display a certain modesty, a wisdom which at times our ancestors possessed and which could constitute the basis of a new morality ?

What is at stake, indeed, is not merely the survival of the human race, but the survival of all living things. If man really wants to live in harmony with the natural environment, as he claims he does today, he must show respect not only for human rights but also for the rights of life in its widest sense. ■

Photo © Les Cahiers Médicaux Lyonnais. Lyon, France

A PHILOSOPHY FOR UNESCO

(Continued from page 23)

world political unity can later be built. It can help the peoples of the world to mutual understanding and to a realization of the common humanity and common tasks which they share, as opposed to the nationalisms which too often tend to isolate and separate them.

It can promote enterprises which, by being fully international from the outset, demonstrate that nationality and nationalism can be transcended in shared activity.

With all this Unesco must face the fact that nationalism is still the basis of the political structure of the world, and must be prepared for the possibility that the forces of disruption and conflict may score a temporary victory.

But even if this should occur, Unesco must strain every nerve to give a demonstration of the benefits, spiritual as well as material, to be obtained through a common pool of tradition, and specifically by international co-operation in education, science, and culture, so that even should another war break out, Unesco may survive it, and in any case so that the world will not forget.

Our evolutionary analysis shows clearly enough that a well-developed human individual is the highest product of evolution to date. This provides external and scientific support for the democratic principle of the dignity of men, to which by its Constitution Unesco is committed.

It also constitutes a complete disproof of all theses (...) which maintain that the State is in some way higher than the individual, and that the individual exists only or primarily for the State.

The human individual is, quite strictly, meaningless in isolation; he only acquires significance in relation to some form of society. His development is conditioned by the society into which he is born and the social traditions which he inherits; and the value of the work he does in life depends on the social framework which benefits by it or transmits it to later time.

Thus Unesco's activities, while concerned primarily with providing richer development and fuller satisfactions for the individual, must always be undertaken in a social context; and many of its specific tasks will be concerned with the social means towards this general end—the improvement of social mechanisms or agencies, such as educational systems, research organizations, art centres, the press, and so forth.

The unifying of traditions in a single common pool of experience, aware-

CONTINUED PAGE 33

The struggle to save Venice

In 1966 Unesco and the Italian Government launched an international campaign to save Venice, increasingly threatened by flooding from the sea, which for centuries had brought life and splendour to the city. The Italian Government called on Unesco's co-operation because of the complexity and scale of such problems as land subsidence, water and air pollution, flooding at high tide, deterioration of monuments and buildings, and an exodus of inhabitants due to economic stagnation. As part of the Venice campaign the Italian Government has obligated about $475 million for major preservation work. "Save Venice" committees in a number of countries, acting in co-ordination with Unesco, will be responsible for restoring some of the more seriously threatened buildings. But an enormous effort will still be needed to save Venice and its countless masterpieces of art.

Photo © Fulvio Roiter, Venice

Photo Laurenza - Unesco

Rescuing monuments in peril

Photos on this page illustrate three of the 21 projects to preserve the world's great monuments and other cultural treasures launched under Unesco's auspices. Above, Machu Picchu, the famous Inca citadel in Peru, where monuments are being preserved and the site profected. Below left, a sculpture at Borobudur, the great Buddhist temple in Java (Indonesia). Built 1100 years ago, it has suffered extensive damage and decay. Restoration work will be completed in 1982 and is expected to cost about $11.9 million. Unesco has pledged $5 million through voluntary contributions, and its Member States have already donated large sums for this rescue operation. Below, Roman remains at Carthage (Tunisia), a historic site where an international campaign of monument preservation and archaeological excavation is in progress.

Photo © Marc Riboud - Unesco

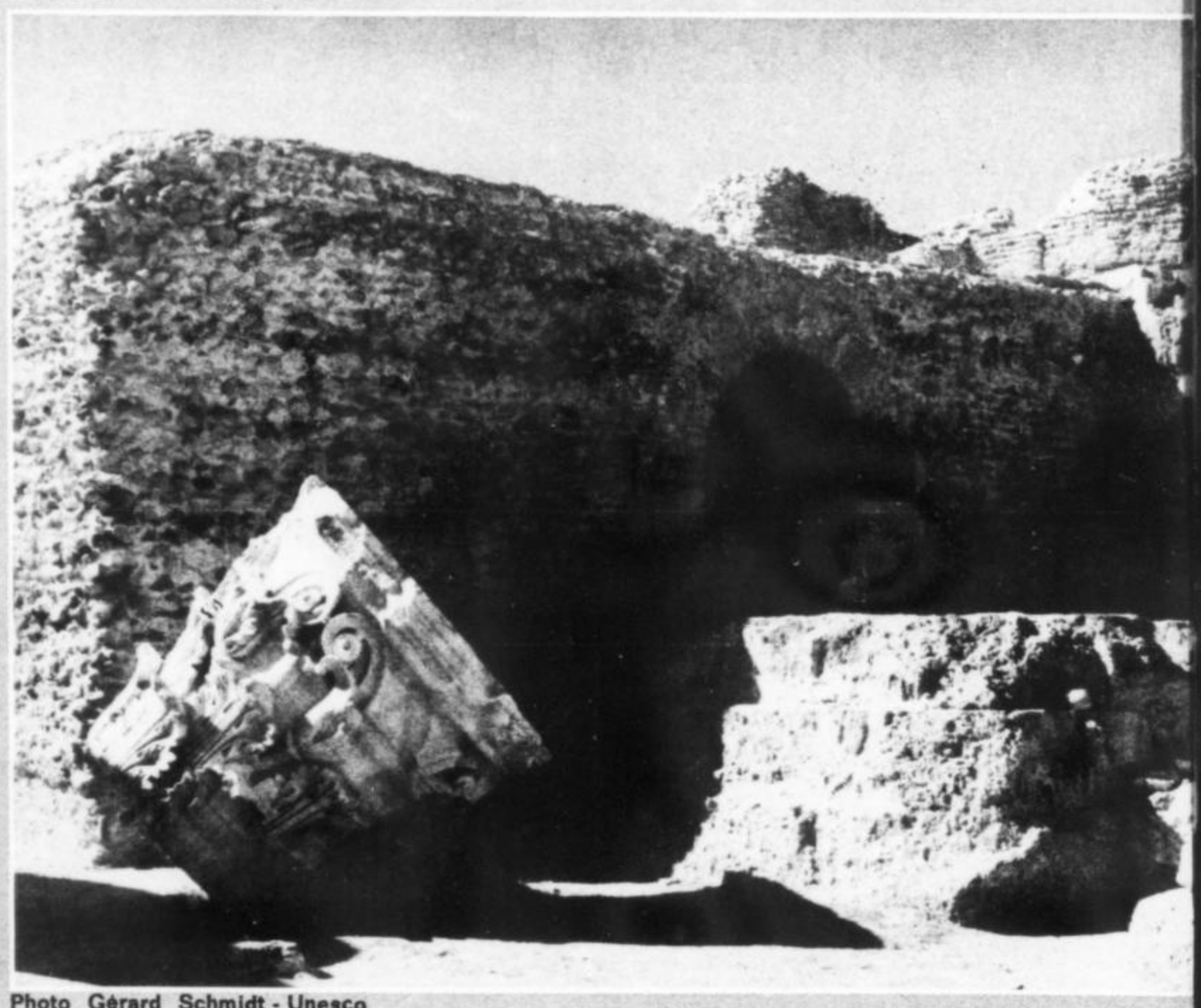


Photo Gérard Schmidt - Unesco

ness, and purpose is the necessary prerequisite for further major progress in human evolution. Accordingly, although political unification in some sort of world government will be required for the definitive attainment of this stage, unification in the things of the mind is not only also necessary but can pave the way for other types of unification.

Thus in the past the great religions unified the thoughts and attitudes of large regions of the earth's surface; and in recent times science, both directly through its ideas and indirectly through its applications in shrinking the globe, has been a powerful factor in directing men's thoughts to the possibilities of, and the need for, full world unity.

SPECIAL attention should consequently be given by Unesco to the problem of constructing a unified pool of tradition for the human species as a whole. This, as indicated elsewhere, must include the unity-in-variety of the world's art and culture as well as the promotion of one single pool of scientific knowledge.

But it must also eventually include a unified common outlook and a common set of purposes. This will be the latest part of the task of unifying the world mind; but Unesco must not neglect it while engaged on the easier jobs, like that of promoting a single pool of scientific knowledge and effort.

From this global aim, another principle immediately follows. It is that Unesco should devote special attention to the levelling up of educational, scientific and cultural facilities in all backward sectors where these are below the average, whether these be geographical regions, or under-privileged sections of a population. To use another metaphor, it must attempt to let in light on the world's dark areas.

The reason for this is plain. For one thing it will be impossible for humanity to acquire a common outlook if large sections of it are the illiterate inhabitants of a mental world entirely different from that in which a fully educated man can have his being, a world of superstition and petty tribalism in place of one of scientific advance and possible unity.

Thus mass campaigns against illiteracy and for a common fundamental education must form part of Unesco's programme. Further, a satisfactory common scale of values can obviously not be attained so long as large sections of mankind are preoccupied with the bare material and physiological needs of food, shelter, and health.

Again, science will not achieve its optimum rate of advance, either in research or in its application, until its light is more evenly shed over the dark surface of the world's ignorance, so as to provide a more equable distribution of scientists, of apparatus, and (equally important in the long run) of popular understanding of science.

With art and the appreciation of beauty, much of the "dark area" is differently situated—in the centres of industry and among the proletariat of industrially advanced sections. But the task of lightening the dark spots in this field is no less urgent than in education or in science.

Furthermore, social mechanisms must be constructed in the right way if they are to provide the basis for realizing the right values and for providing individuals with the fullest opportunities and satisfactions.

An educational system, for instance, can just as readily be made to promote the idea of a chosen race or of a privileged caste as it can that of the dignity of men and the equality of their opportunity.

A scientific system can be based on secrecy and focussed on war or on economic rivalry; or it can be focussed on increasing human knowledge and human welfare, and founded on freedom.

A mass-production system can indirectly destroy creative initiative and aesthetic appreciation, and lead to apathy or escapism, as readily as it can be made to function directly to produce for real human needs.

Thus broad studies of various social mechanisms and their effects, conducted in the light of some general philosophy, will necessarily form part of Unesco's programme.

FINALLY we come to a difficult problem—that of discovering how we can reconcile our principle of human equality with the biological fact of human inequality. Perhaps the problem is not so difficult as it appears when stated in this paradoxical form; for the contradiction largely disappears as soon as it is realized that equality is used in two very different senses.

The democratic principle of equality, which is also Unesco's, is a principle of equality of opportunity—that human beings should be equal before the law, should have equal opportunities for education, for making a living, for freedom of expression and movement and thought. The biological absence of equality, on the other hand, concerns the natural endowments of man and the fact of genetic difference in regard to them.

Concretely, genetic human inequality is of two types. First, there is the inequality of mere difference. Some people are fair, others dark; some are tall and thin, others short and stocky; some have a natural gift for music, others for athletics; some are introspective, others practical and extrovert. Indeed, we can now definitely state that no two human beings, with the single exception of the members of pairs of identical twins, are biologically equal in the sense of possessing the same genetic constitution, so that biological difference is, for all practical purposes, universal.

Furthermore, the range and degree of genetic variety in man is greater than that to be found in any other animal species. This is largely due to one of man's biological peculiarities, namely that his local differentiation into races is not continued to the stage of separate and intersterile species, as in almost all other organisms, but has always been followed by migration and interbreeding. But whatever its cause, the resultant high degree of variability is a fact, and one of considerable evolutionary importance.

Secondly, there is difference in quality or level. Human beings are not equal in respect of various desirable qualities. Some are strong, others weak; some healthy, others chronic invalids; some long-lived, others short-lived; some bright, others dull; some of high, others of low intelligence; some mathematically gifted, others very much the reverse; some kind and good, others cruel and selfish.

It is usually not so easy to say how much of this second sort of inequality is due to heredity and therefore relevant for our purpose; how much only to the effects of physical or social environment. But in most cases we now know, and in almost all can be reasonably sure, that some at least of the difference is genetic.

This is certain, for instance, of length of life, physical strength, and, most important for our purpose, for intellectual gifts—both special ones like mathematical aptitude and general ones like intelligence; while it is highly probable for some aspects of moral qualities, though the situation here is more complex.

It is therefore of the greatest importance to preserve human variety; all attempts at reducing it, whether by attempting to obtain greater "purity" and therefore uniformity within a so-called race or a national group, or by attempting to exterminate any of the broad racial groups which give our species its major variety, are scientifically incorrect and opposed to long-run human progress. On the contrary, Unesco should aim at securing the fullest contribution to the ▶

International partnership in science

Photo United Nations

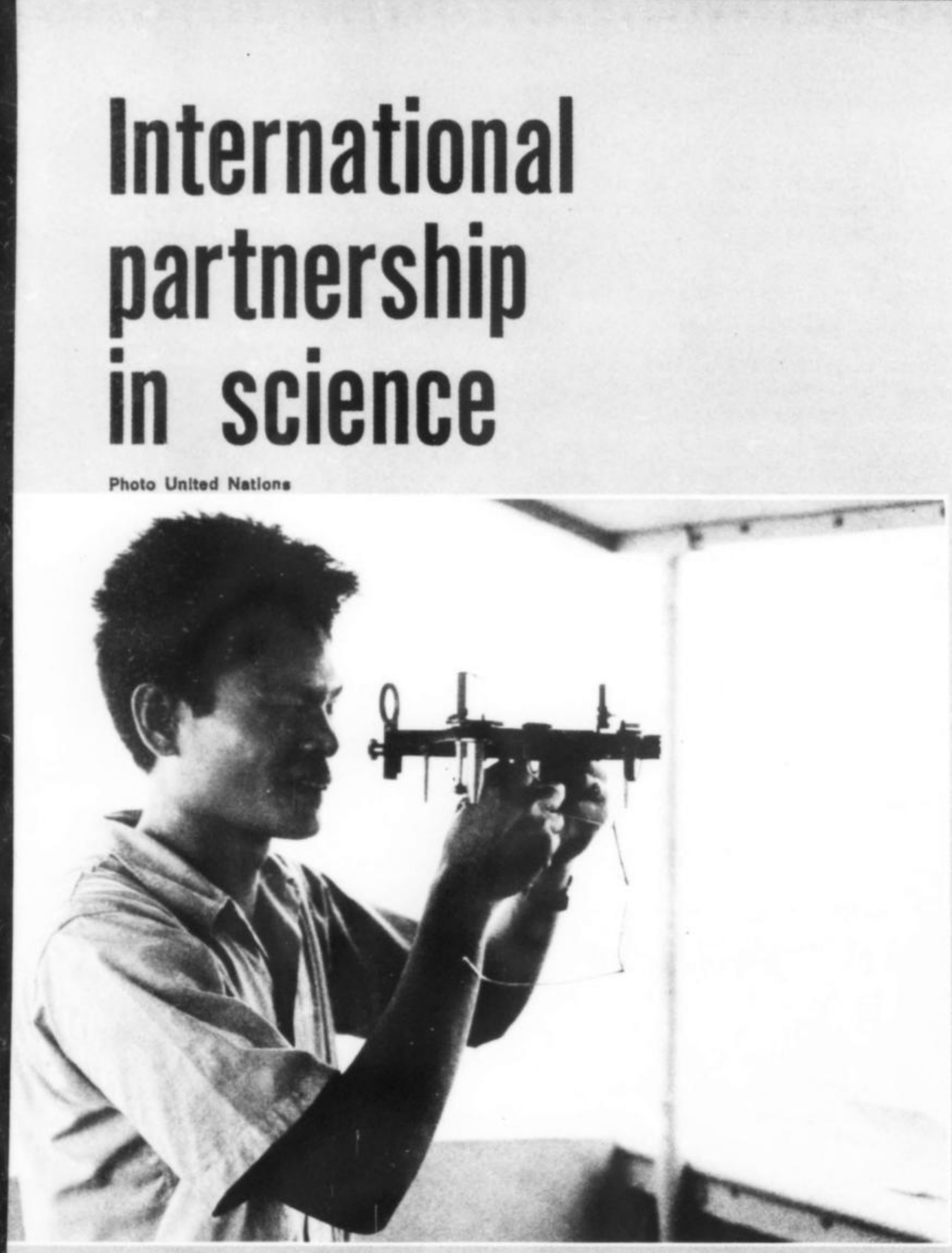


Photo Rex Keating-Unesco

Over 100 countries joined forces to study the world's water problems during Unesco's International Hydrological Decade which lasted from 1965 to 1974. Since 1975 this co-operation has continued through Unesco's international hydrological programme, enabling countries to assess and make better use of their water resources to meet the needs of their populations, industry and farming. Above a trainee hydrologist in south-east Asia learns use of new survey equipment.

common pool from racial groups which, owing to their remoteness or their backwardness, have so far had little share in it.

To adjust the principle of democratic equality to the fact of biological inequality is a major task for the world, and one which will grow increasingly more urgent as we make progress towards realizing equality of opportunity. To promote this adjustment, a great deal of education of the general public will be needed as well as much new research; and in both these tasks Unesco can and should co-operate.

The task before Unesco is necessary, is opportune, and, in spite of all multiplicity of detail, is single.

That task is to help the emergence of a single world culture, with its own philosophy and background of ideas, and with its own broad purpose. This is opportune, since this is the first time in history that the scaffolding and the mechanisms for world unification have become available, and also the first time that man has had the means (in the shape of scientific discovery and its applications) of laying a world-wide foundation for the minimum physical welfare of the entire human species.

And it is necessary, for at the moment two opposing philosophies of life confront each other from the West and from the East, and not only impede the achievement of unity but threaten to become the foci of actual conflict.

You may categorize the two philosophies as two supernationalisms; or as individualism versus collectivism; or as the American versus the Russian way of life; or as capitalism versus communism; or as Christianity versus Marxism; or in half a dozen other ways. The fact of their opposition remains and the further fact that round each of them are crystallizing the lives and thoughts and political aspirations of hundreds of millions of human beings.

Can this conflict be avoided, these opposites be reconciled, this antithesis be resolved in a higher synthesis? I believe not only that this can happen,

As part of its programme on the study and prevention of natural disasters, Unesco has organized many emergency scientific missions to disaster-hit areas. Following the devastating earthquake in Guatemala in February 1976, Unesco immediately sent a team of experts in engineering, school building, seismology and monument restoration to study the earthquake's causes, assess the damage and advise on earthquake-resistant reconstruction. Photo left shows Unesco seismologists studying the after-shocks of a major earthquake in Khorassan province, Iran, in 1968.

Promoting international co-operation in oceanographic studies, the Intergovernmental Oceanographic Commission of Unesco co-ordinates major marine research programmes in a number of ocean regions. Amongst other projects, the Commission is developing an integrated global ocean station system for monitoring the world's oceans and a comprehensive plan for global investigation of pollution in the marine environment. Below, the German (Fed. Rep.) ocean research vessel "Anton Dohrn", veteran of many international expeditions.

Photo Hempel - Unesco

but that, through the inexorable dialectic of evolution, it *must* happen—only I do not know whether it will happen before or after another war. Since another war would be so appalling as to set back the march of human progress by centuries, I am convinced that the task of achieving this synthesis in time to forestall open conflict must be the overriding aim of Unesco.

In pursuing this aim we must eschew dogma—whether it be theological dogma or Marxist dogma or philosophical or any other form of dogma. East and West will not agree on a basis for the future if they merely hurl at each other the fixed ideas of the past. For that is what dogmas are—the crystallizations of some dominant system of thought of a particular epoch.

A dogma may, of course, crystallize tried and valid experience; but if it be dogma, it does so in a way which is rigid, uncompromising and intolerant. What, for wanting a better term, I have called doctrine may also embody valid experience; but it may be flexible, may be capable of growth and development and adjustment.

Some dogmas may represent a more recent past than others; but that does not render them any the less rigid and accordingly any less dangerously out of date, any less incapable of reconciliation with opposing systems. If we are to achieve progress, we must learn to uncrystallize our dogmas.

The two opposing philosophies of today differ essentially on one point—the relation between the individual and the community. But this one central difference provides differences in every field with which Unesco has to deal, as well as in many others.

It engenders different moralities and systems of ethics; different methods of education; different conceptions of the role of art in society; different economic systems; different ways of integrating science with national life; different interpretations of the fundamental human freedoms; different con-▶

Photo Bracher-Unesco

Article 27 of the U.N. Declaration of Human Rights says that "everyone has the right freely to participate in the cultural life of the community". Unesco has been trying to make this principle a living reality by encouraging a broad programme of educational and cultural development and an awareness, particularly amongst the world's newer nations, of cultural identity. In Africa and elsewhere Unesco is engaged on a long-term programme for the preservation of oral traditions. The preparation of a *General History of Africa,* at present under way, is part of this overall approach. Above, visitors admire works of African art during the 1966 Festival of Negro Art in Dakar (Senegal) organized with Unesco's help.

ceptions of the possibilities and limits of international co-operation.

I believe that these differences, though they will undoubtedly become irreconcilable without armed conflict if they are permitted to express themselves as dogmas, to embody themselves in rigid social systems, and to become translated into terms of politics and power, can in principle be reconciled. They can be reconciled along the lines of some such evolutionary humanism as I have sketched in my opening sections, in which, though the full development of the individual is recognized as the central aim and criterion of further evolutionary progress, the proper organization of society is recognized as the indispensable mechanism of that progress.

Put in another way, society as such embodies no values comparable to those embodied in individuals. But individuals are meaningless except in relation to the community (though that community transcends the nation both in space and in time), and can only achieve fullest self-development by self-transcendence, by interpenetration of the self with other reality, including other selves.

The problem is thus not one of metaphysics or dogma, but essentially practical—how best to adjust or still better to reconcile the claims of two concrete sets of realities—individual human beings, and human social organizations.

Accordingly, I believe that this reconciliation can be approached from two directions. It can be approached from above and from outside, as an intellectual problem, a question of agreement in principle; and it can also be approached from below and from within, as a practical problem, a question of agreement through action.

The world is potentially one, and human needs are the same in every part of it—to understand it, to control it, and to enjoy it. Anything that Unesco can do to satisfy these needs through promoting education, science and culture, will be a step towards a unified way of life and of looking at life, a contribution to a foundation for the unified philosophy we require.

And finally, I believe that a body such as Unesco, which is charged with promoting both the higher activities of man and their practical application, and of doing so on an international scale, is the most likely agency to make this dual approach and so to speed up this necessary process of reconciliation.

■ ***Julian Huxley***

Letters to the Editor

NO CHILD MARRIAGES IN SRI LANKA

Sir,

In his article "Machismo—Latin America's Myth Cult of Male Supremacy" (Unesco Courier, March 1975) Hernan San Martin has made an extremely misleading comment with regard to the marriage system in Sri Lanka. He refers to an interpretation of "the 'purity' of women among the castes of Sri Lanka and the Malabar Coast in India, where girls are married at an extremely early age, before puberty, perhaps with the aim of defending this 'purity' through a commitment to marriage and fidelity" (page 31).

The institution of marriage and the pattern of marriage in Sri Lanka taken horizontally from urban areas to rural areas and vertically from the earliest times to the present, does not reveal any marriage of girls before puberty. To say otherwise is a complete aberration of facts as far as Sri Lanka is concerned.

I have no doubt that Hernan San Martin has referred to Nur Yalman's article which appeared in the Journal of the Royal Anthropological Institute (Vol. 93, 1963) under the title "On the Purity of Women in the Castes of Ceylon and Malabar". But even this article did not mention an incidence of pre-puberty marriages in Sri Lanka. However, in another issue of the same journal (Vol. 89, 1959) an article by E.K. Gough reported pre-puberty marriages among the Nayars of Malabar, though not in Sri Lanka.

B.A. Tennyson Perera
Dept. of Sociology
University of Sri Lanka, Nugegoda

LEARNING FROM BURMA

Sir,

Reading the letter from France in your January 1976 issue about women's lost identity [on taking a husband's name] reminded me of Khin Myo Than's eye-opening article "From a Young Burmese Girl's Notebook" in the March 1975 issue on International Women's Year.

No change of name, no ring, equal rights and responsibilities under marriage law, personal names for children to last for life, neither man nor woman subordinate to the other but working in a complementary way. This has been so for centuries.

We, in Europe, could learn from Burma. All countries should be prepared to learn from each other more.

Patricia Martland
Letchworth, England

THE CELTS

Sir,

I congratulate you most warmly on the December 1975 issue of the "Unesco Courier" devoted to the Celts. This really is a splendid piece of work and I am recommending it to all my pupils and am getting copies of the issue to put in various college and department libraries.

With all good wishes.

Dr. Glyn Daniel
Editor, "Antiquity" St. John's College
Cambridge, England

WOMEN'S RIGHTS IN URUGUAY...

Sir,

In your March 1975 International Women's Year issue, Helvi L. Sipilä writes in her article "Women's Lib—30 Years of Progress" that in some countries a woman needs "the authorization of her husband or the court to exercise her legal capacity to contract, sue and be sued (e.g. Ecuador, Haiti, Mexico, the Philippines, Uruguay)."

As far as Uruguay is concerned this statement is incorrect since there are no restrictions on women's legal rights in Uruguay on the grounds of sex. Urugayan women have enjoyed equal civil rights with men since 1946 and in fact their rights are in some cases greater than men's. For instance only women have the right to seek a divorce simply because they want the marriage to be dissolved, without citing any specific reason. This being so, it is unfortunate that your list of "Milestones Towards Emancipation", on page 9 of the same issue, did not mention this measure dating from 1946. The list also notes that women obtained the vote in France and Italy in 1945 but omits to say that in Uruguay voting rights were extended to women in the 1920s.

Herminia N. Martinez de Sposto
Lawyer
Montevideo, Uruguay

... TUSCANY

Sir,

Since the appearance of your chronological list of "Milestones Towards Emancipation" in your March 1975 International Women's Year issue, you have published two readers' letters giving further information on this subject. One pointed out that women obtained the vote in the Isle of Man in 1881, the other that voting rights were extended to women in South Australia in 1894 and Western Australia in 1899.

I should like to point out that the Grand Duchy of Tuscany, one of the States constituting Italy before unification in 1860, granted voting rights to women on 20 November 1849. This right was exercised by means of a male intermediary and only provided a limited degree of freedom to vote. However, it was a first step, and when the first Italian parliament began its work, a deputy who proposed that voting rights be granted to women added that if the Assembly rejected his proposal (which it did) it would cause serious discontent in this region where women already had the vote.

Dr. Marina Della Seta
Rome, Italy

...AND IRAN

Sir,

In your March 1975 issue, Iran is listed as having banned the veil in 1963. This information is incorrect.

In Iran, the veil was banned by Reza Shah Pahlavi in 1934. What is correct is that political rights for women in Iran, including the right to vote, were gained in 1963.

In 1967 and 1975 Iran's laws were changed to allow women to sue for divorce and be awarded custody of children in the event of their husband's death.

Haleh Esfandiari
Women's Organization of Iran
Tehran, Iran

UNESCO'S RAINBOW CARD GAME

On the occasion of its 30th anniversary, Unesco is telling people about itself and its work through a card game for players of all ages, devised and produced by graphic artists Freimut Steiger of Austria and Markus Osterwalder of Switzerland. The game (see back cover) is currently available in a French edition, produced in co-operation with the French National Commission for Unesco. It is hoped that other editions will shortly appear in different languages.

The 50 cards in the set (eight each coloured blue, green, yellow, orange, red or violet, and two jokers) are composed of the letters in the word UNESCO. Each letter, illustrated with a drawing, symbolizes one of Unesco's major activities : its work for peace and human rights, international understanding, education, science, culture and communications.

The game may be played by 2, 3, 4, 5 or 6 players. The object is to form the word UNESCO several times, the first time respecting a specific order of the colours in the rainbow. Six cards are dealt to each player; the remaining cards are placed in front of the dealer, face down. The first player must play a U, first letter of the word Unesco, or a joker. If he has neither, he takes a card from the pack. If he draws a U or a joker, he plays it. If not he keeps the cards and the next player tries to start the game.

Once the word UNESCO has been completed, players use it as a base from which to form the word again vertically or horizontally. They need not follow the same colour sequence as the first time but they must not place two cards of the same colour in the word UNESCO in any direction.

Jokers already played may be replaced by letter-cards. A player who does this may then replay the joker or another card but may not draw from the pack.

A player placing a U must play a second card (except for the player who starts the game) provided that it can be placed in the line formed from this U. If not he takes a card from the pack.

The first player to use up all his cards wins the round.

The game is currently available at the Gift Shop in Unescos H.Q., 7 Place de Fontenoy, Paris 75700 (price 16 French francs) and will later be obtainable at other sales points.

JULIAN HUXLEY

SCIENTIST, HUMANIST AND LOVER OF NATURE *(Continued from page 12)*

for most of the scientific work. He therefore resigned his chair at King's College, London and devoted himself full time to preparing and editing the far-ranging encyclopedia.

The formidable work took three years to complete; but it gave Huxley an opportunity to deepen his knowledge of a vast range of subjects—and also to display his descriptive powers. From then onwards he was asked increasingly often to use his undoubted gift as an interpreter of scientific subjects, for which many years later, he was to receive the Kalinga Prize awarded by Unesco (1).

AFTER such a long period of concentrated writing he felt the need of a break. So he packed his notebooks and instruments and set off for Africa. He had been asked to inquire into the state of nature conservation there and also to report on the role of biology teaching in African schools. *Africa View*, the book he wrote after this journey, records his impressions and observations of wild life and human problems in this vast region.

Near Nairobi he met the young paleontologist Louis Leakey, who already believed that primitive man had first appeared in Africa, a hypothesis he was to prove thirty years later when he found the famous fossil skull of *Zinjanthropus*. Huxley went on safari with his wife Juliette in the Belgian Congo (today Zaire), and studied there the great fauna of equatorial Africa in their natural habitats.

When he returned to the United Kingdom in January 1930 he presented a report that included a scheme for setting up nature reserves for the wild animals of the entire region, but it was some years before his proposal was accepted.

After the African trip, Huxley paid a brief visit to the U.S.S.R. This gave him material for another travel book, *A Scientist among the Soviets*. On his return to London he resumed work on a major study dealing with the differences in growth of different parts of the body. This was published in 1932 under the title *Problems of Relative Growth*.

As soon as he finished it he began another ambitious project with his former pupil, Gavin de Beer; the preparation of *Principles of Experimental Embryology*. This book took two years to complete. When it appeared in 1934 it had an immediate success, and for many years was widely used by teachers and researchers.

The 1930s saw a vast wave of propaganda concerning racial myths that falsely claimed to be scientific. It provoked a vigorous reaction from Julian Huxley. He wrote a stinging counter-attack to the Nazi slogans, dismantling the theories of racial superiority point by point and showing they had no more weight than a house of cards. His book, *We Europeans*, was published in 1935. It demonstrated that there was no such thing as "pure race" anywhere in the world and that the qualities and achievements of each so-called race or ethnic group were determined mainly by environment and cultural history.

But these many activities never deflected Huxley from his vocation as a dedicated naturalist. During the same period he began a new venture, with film director Alexander Korda. Together they made a marvellous documentary on seabirds, shot on a small offshore island, and called it *The Private Life of the Gannet*.

When the film was finished Huxley went off to southwest Ireland, near Lough Ine. Here he studied a lakeworm, the *Sabella*, whose body showed a remarkable and completely unexpected ability to achieve new growth after amputation. He discovered that headless fragments of thorax would regenerate a complete thorax and abdomen, though it had previously been supposed that the brain and its nerves were necessary for the process.

IN 1935 Julian Huxley agreed to become Secretary of the London Zoological Society, a post he was to hold until 1942. In his autobiography he writes at some length about this phase of his long career, a period marked by the convulsions of World War II and the bombardment of London.

In the midst of much work and worry Julian Huxley nevertheless found time to produce one of his most important books: *Evolution, the Modern Synthesis*. It appeared during the war, in 1942, soon after he had resigned from his post at the London Zoo. "It is perhaps the work I am most proud to have achieved", he notes in his autobiography.

Soon after war broke out the British Broadcasting Corporation invited Julian Huxley to join the Brains' Trust—a weekly programme in which a small group of distinguished figures discussed various questions submitted by the public. He also wrote a number of articles and a booklet, *Reconstruction and Peace*, in which he stressed the need to look ahead to the post-war world and to prepare fair peace terms and material aid, not only for the occupied countries but for Germany herself, so that she too could rise from ruin and defeat.

On the suggestion of the Conference of Allied Ministers of Education, Britain, France and the United States invited the countries which had fought alongside them to meet for discussions on the setting up of an international organization concerned with education, science and culture. The conference, held in London in November 1945, set up a Preparatory Commission and Julian Huxley agreed to become its Executive Secretary.

The proposals he made concerning this ambitious project reveal the bold and broad sweep of his vision. Rereading them thirty years later, as he presented them at the first General Conference of the new organization in a paper entitled *Unesco, its Purpose and its Philosophy*, one is struck by his inspired foresight.

Regrettably, at that time the delegations did not share his insights and felt unable to adopt the proposal. The plan was shelved, but by degrees a good many of its features have come to figure in Unesco's programme. The extracts of this remarkable document published elsewhere in this issue (page 14) will enable readers of the "Unesco Courier" to judge the true significance of his proposals.

With equal ease Julian Huxley discussed and analysed questions concerning education or information, the natural sciences and the human sciences. The opinions he expressed at meetings of Unesco's Executive Board or at its General Conferences always sparkled with intelligence, and often with humour. A natural frankness gave his ideas a sincerity that imposed respect, even from his most determined opponents.

Placed at the service of Unesco, his universalist spirit opened unlimited horizons which reveal Julian Huxley's tremendous contribution to international co-operation, to cultural development and to the cause of peace.

Unesco is soon to publish a complete bibliography of his writings. The scientist, philosopher and apostle will gradually take his rightful place among the illustrious figures of our century. Posterity will remember him as much with admiration as with gratitude, and will fully endorse his own judgment of himself. "If I am to be remembered", he wrote, "I hope it will not be primarily for my specialized scientific work, but as a generalist; one to whom, enlarging Terence's words, nothing human and nothing in external nature was alien."

■ ***Paulo E. de Berrêdo Carneiro***

(1) Prize of £1,000 for the popularization of science, created by Unesco in 1951 through the donation of an Indian industrialist, Bijoyanand Patnaik. The prize is awarded by an international jury chosen by Unesco. There have been 24 Kalinga prize-winners to date.

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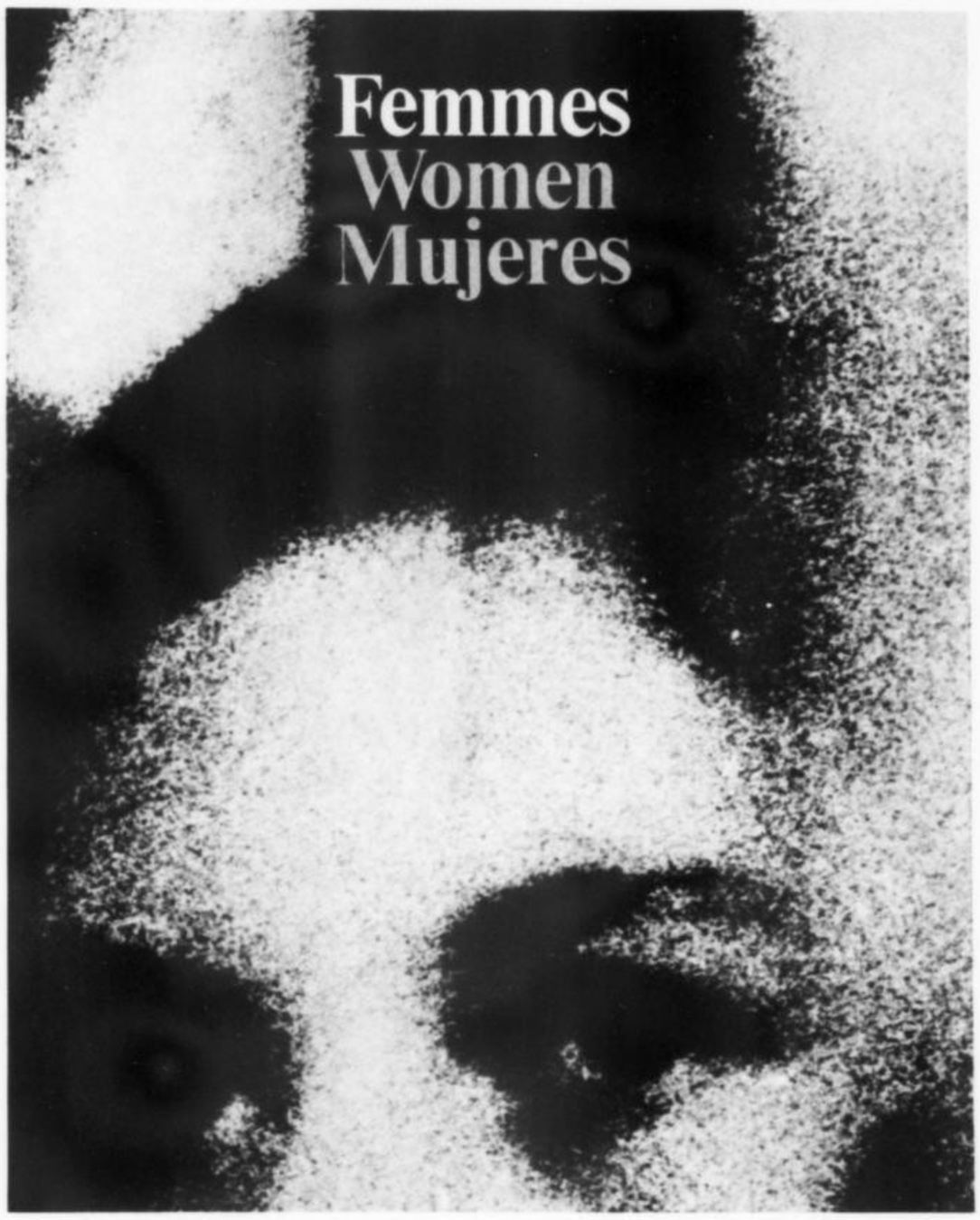

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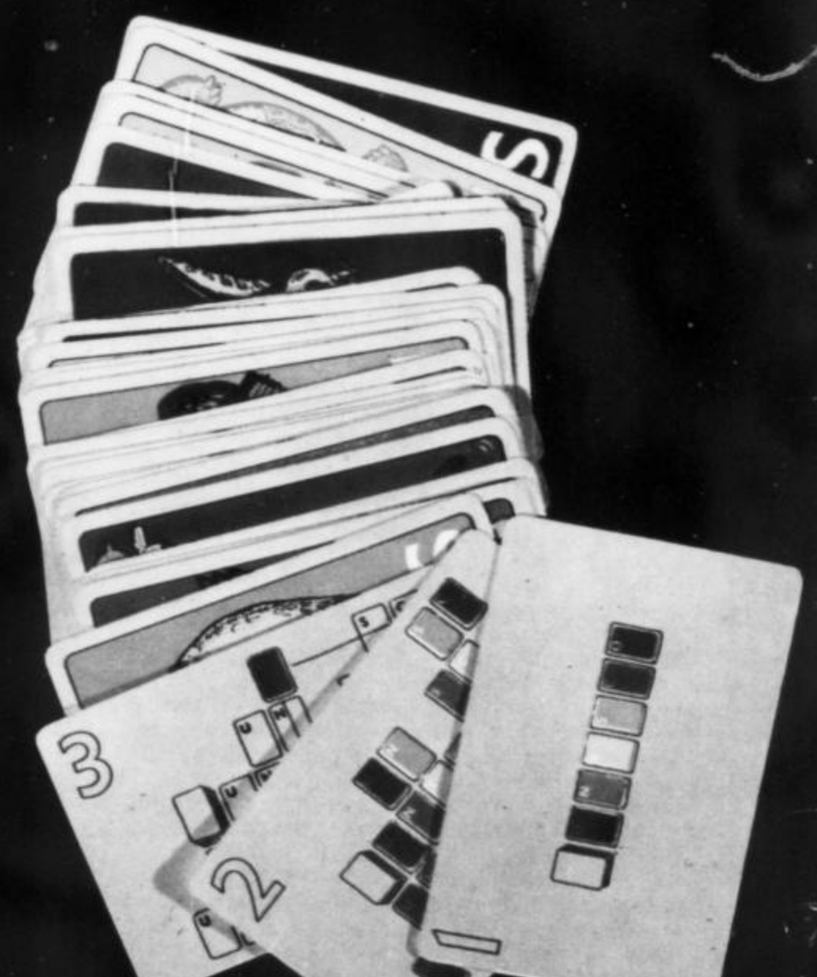
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